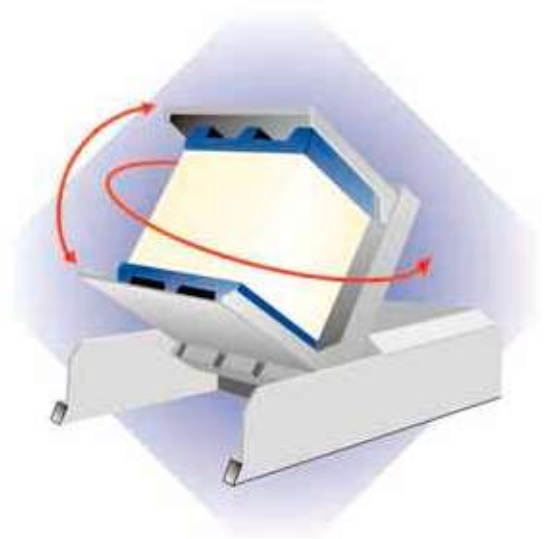


# P i l e T u r n e r



**Pile Turner**

**Much more  
than just  
a pile turner**



# Top quality – Made in Germany

Originally the machine was used just for turning paper, to replace manpower by machinery. Nowadays it fulfils many more additional tasks, such as

Airing · Dust removing · Drying · Aligning · Jogging

For the demands of the printer or paper and board converter a pile turner with these capabilities represents an indispensable piece of equipment.

The Busch pile turner speeds up and improves both the printing and the finishing process. Different sorts of paper and board with varying weights can be handled on the turner. As the demands for quality increase, the pile turner represents a sensible investment.

In 1976 the first Busch pile turner was designed and delivered.

With decades of experience a perfect engineering is guaranteed – and top quality is Busch's first priority. The solid and modern designed machines are well known for their

easy handling – they are used worldwide and prove a notable longevity.

All Busch pile turners are designed and manufactured in own factories in Germany (Seevetal).

The large range of models, with numerous options, fulfils all individual requirements.

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## **SPEEDTURNER®** SWH Series

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# Functions of the Pile Turner

Pile turners are available just as a turning unit or with airing and aligning, and with the additional option of jogging. The following pages give detailed information of all available models and options.

## Turning – easy and comfortable

Turning is done by hydraulically lifting the pile to the horizontal position and subsequently rotating it through 180°. It replaces time-consuming manual handling.

## Airing – what can be achieved?

### Dust removing

An important process before printing to achieve better print quality - absolutely essential for the board converter.

### Separation of cutting edges

To avoid mis-feeds. The complete pile is filled with an air cushion between the sheets.

### Conditioning

The pile is provided with the optimum temperature and humidity.

### Removal of spray powder

Removal of surplus spray powder after printing – an advantageous process for finishing.

## Drying

Ink and varnish is quickly dried after printing.  
Heat inside the pile is reduced.

## Odour neutralizing

Important for food packaging.

## Airing with ionised air

Ionisation reduces the electrostatic charge which may affect the finishing process of coated and printed paper or plastic foil.

## Aligning the pile

The pile is aligned against the aligning gauge in the tilted position with high volume airing.  
Bad sheets can be removed without a problem – depending on the thickness of the material.

## Jogging

The ideal support to speed-up perfect alignment of the pile – in the tilted position with high volume airing.

## Centring the pile

The pile can be centrally aligned on a larger-sized pallet without problem.



Control desk



Aligning gauge (adjustable)



Transport

# Preferences of a Busch Pile Turner

Two model series are available – the efficient low priced **SE series** and the **SPEEDTURNER® SWH series** for high demands.

- With decades of experience, Busch guarantees perfect engineering
- Top quality modern design
- Large range of model variations
- Embedding in the floor or fixing to the floor is unnecessary
- An optimal hydraulic system (counter torque lowering valves) and a powerful airing system
- Blowers for the airing system are integrated in the machine body
- The platforms allow the use of all sorts of transport and machine pallets. Loading and unloading is made from the wide side
- The clear aluminium control desk can be fitted on either side
- The control desk is slewable (on turners with airing) which facilitates the control at the front and rear of the pile during airing
- Models equipped with pressure control flaps ensure that the pile is not compressed, so that the air cushion is preserved in the pile – important for finishing printed sheets!
- Individual control of air jets (at the control desk)
- Regulation of air jet speed (at the control desk)
- The optional equipment with ionised air reduces the electrostatic charge of paper and plastic foil



Loading position



Lifting position

## Advantages

- The Busch pile turner speeds up the printing and finishing process
- The press can run permanently at high speed
- The pile turner needs less than 1 minute for turning a pile
- and 4-5 minutes, on average, for turning, airing and jogging the pile
- Any employee can operate the pile turner

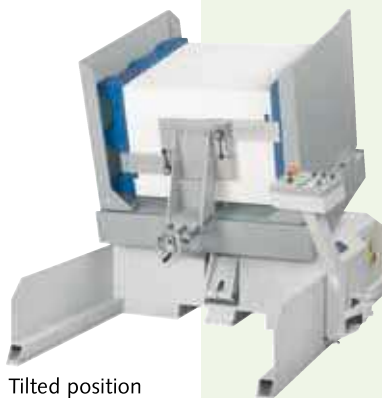
The integrated programmable logic controller (PLC) enables automated airing processes and hydraulic functions as well as a clear fault diagnostic at the display (on all turners with airing)

Pile turners of **SPEEDTURNER®** SWH series with airing include pressure control flaps as standard. The aligning gauge is adjustable according to sheet width and pile height. The jogging intensity is adjustable at the control desk. Air jets are travelling just under the respective pile height. Alternatively it is possible to pre-select the number of air jet travels (start and stop) to enable an airing process without the presence of an operator.

Taking into account all possible options – a wide spectrum is achieved for processing paper and board with extreme variations in quality.



Rotation



Tilted position  
airing and aligning



Rear side  
removal of bad sheets

## The efficient low priced SE Pile Turner



**SE 90 / SE 125**

for turning only



**SE 90 RLA / SE 125 RLA**

for turning, airing, jogging and aligning

### SE 90 und SE 125

for turning only (without airing), with fixed control desk

#### Options

for SE 90: pressure control flaps (the pile is not compressed)

for SE 125: pressure control flaps (the pile is not compressed), enlarged opening height of platforms for pile heights up to 1750 mm and increased carrying power (1200 kg)

### SE 90 RLA und SE 125 RLA

with airing (1 blower), slewable control desk, fixed aligning gauge, jogging, tilting (15°), regulation of air volume by hand lever located on the machine body

#### Option

pressure control flaps (the pile is not compressed)

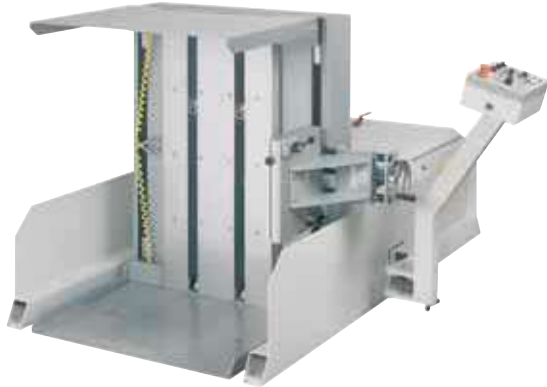
### Model Series SE 90 and SE 125

Model		SE 90	SE 90 RLA	SE 125	SE 125 RLA
Max. sheet size	mm	600 x 750	600 x 750	800 x 1200	800 x 1200
Max. pile height	mm	1200	1200	1350	1350
Min. pile height	mm	290	290	380	380
Platform width	mm	900	900	1250	1250
Platform depth	mm	620	620	900	900
Carrying power	kg	500	500	1000	1000



# The SWH Pile Turner – powerful and efficient with a lot of options

# SWH Series



## SWH 90 (R) LA

for turning, airing and aligning,  
with the option of jogging



## SWH 90 LA

with airing (1 blower),  
pressure control flaps, regulation of air volume  
(hand lever), adjustable aligning gauge,  
tilting (15°), slewable control desk

## Options

additional blower,  
electrical air volume regulation  
at the control desk,  
ionised air

## SWH 90 RLA

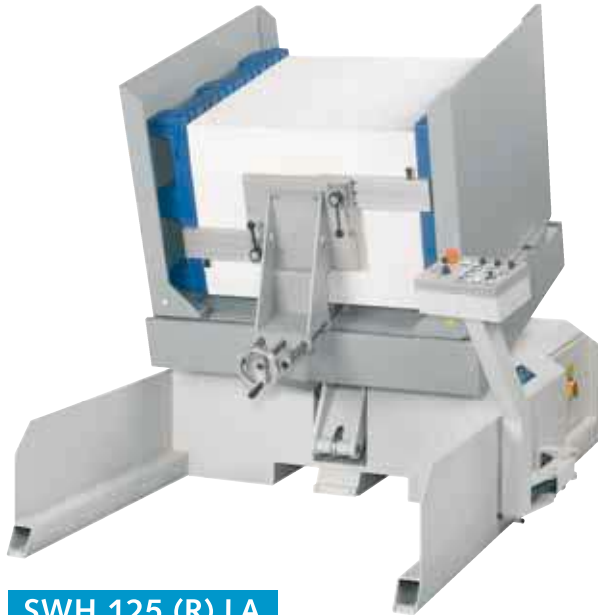
the same as SWH 90 LA  
plus: jogging

## Model Series SWH 90

SPEEDTURNER®

Modell		SWH 90 (R) LA
Max. sheet size	mm	600 x 750
Max. pile height	mm	1200
Min. pile height	mm	540
Platform width	mm	900
Platform depth	mm	625
Carrying power	kg	500

# SWH Series



## SWH 125 (R) LA

for turning, airing and aligning,  
with the option of jogging



Rear view

## SWH 125 LA

with airing (1 blower),  
pressure control flaps, regulation of  
air volume (hand lever), adjustable  
aligning gauge, tilting (15°),  
slewable control desk

## SWH 125 RLA

the same as SWH 125 LA  
plus: jogging

## Options

additional blower,  
electrical air volume regulation at the control desk,  
ionised air, enlarged opening height for pile heights  
up to 1750 mm, catwalk

## Note:

the minimum pile height will be greater on machi-  
nes with enlarged opening height

## Model Series SWH 125

SPEEDTURNER®

Model	SWH 125 (R) LA	
Max. sheet size	mm	800 x 1200
Max. pile height	mm	1350
Min. pile height	mm	650
Platform width	mm	1250
Platform depth	mm	900
Carrying power	kg	1200



## SWH 125 RLA (200) Logistic

- for loading and unloading from the front as well as from one or both sides
- for turning, airing, aligning and jogging
- for transferring piles from mill / machine pallets on to system pallets
- for centring the pile on a system pallet
- either with loading ramps or for embedding in the floor

with enlarged opening height (2000 mm) for higher piles, safety light barriers, manually slewable aligning gauge (adjustable), pressure control flaps, airing with second blower for increased airing power, tilting (15°), slewable control desk, adjustable jogging, electrical air volume regulation

### Option

catwalk

Also available for larger sheet sizes

## Model series SWH 125 LOGISTIC

**SPEEDTURNER®**

Model	SWH 125 RLA (200) Logistic	
Max. sheet size	mm	800 x 1200
Max. pile height	mm	2000
Min. pile height	mm	920
Platform width	mm	1250
Platform depth	mm	900
Carrying power	kg	1200

# SWH Series



## SWH 155 (R) LA / 180 (R) LA

for turning only or with airing and aligning, and with the option of jogging

### SWH 155 and SWH 180

a machine for turning only - without airing and aligning

#### Options

pressure control flaps (the pile is not compressed), enlarged opening height up to 2000 mm for higher piles

### SWH 155 LA and SWH 180 LA

with airing (4 blowers), pressure control flaps, regulation of air volume (hand lever), adjustable aligning gauge, tilting (15°), slewable control desk



### SWH 155 RLA and SWH 180 RLA

the same as SWH 155 LA and SWH 180 LA plus: jogging

#### Options

electrical air volume regulation at the control desk, enlarged opening height up to 2000 mm for higher piles, catwalk, telescopic control desk

Note:

the minimum pile height will be greater on machines with enlarged opening height

## Model Series SWH 155 and SWH 180

**SPEEDTURNER®**

Model		SWH 155, SWH 155 (R) LA	SWH 180, SWH 180 (R) LA
Max. sheet size	mm	1060 x 1450	1220 x 1650
Max. pile height	mm	1600	1600
Min. pile height	mm	760, 830 (R) LA	760, 830 (R) LA
Platform width	mm	1550	1800
Platform depth	mm	1080	1235
Carrying power	kg	1800	1900

## Auxiliary airing device

The auxiliary airing device consists of two metal sections which extend automatically by means of a gas pressure spring. The device is positioned to the height of the loaded pile to avoid light-weight sheets escaping during airing. Four different lengths are available, suitable for each type of pile turner.



Installation, step 1



Installation, step 2



Tilted position

## Magnet bar

For fixing wheeled metal trolleys – available for model series SE 90, SWH 90 and SE 125, SWH 125.

Material: aluminium



## Airing with ionised air

Electrostatic charge may affect the finishing process of coated and printed paper or plastics – especially plastic foil. The charge may be caused by friction of the sheets as well as by UV / IR drying. Compensation of the charge can remedy this effect by creating positively and negatively charged ions. These ions penetrate the pile through the airing system equipped with ionisation, which minimises problems caused by static.

Available for models of the SWH 90 and SWH 125 series with airing.

## Centreing device

This device centrally aligns piles on larger-sized system pallets and consists of 4 limit stops at the platform sides, 1 dial gauge on the hand wheel of the aligning gauge and spring stop ends at the aligning gauge. After loading and turning the pile the system pallet is placed on top of the pile. After lifting the pile again to the horizontal position the system pallet is drawn on to the limit stops and the aligning gauge is adjusted by means of the dial gauge according to the sheet width for centreing the pile on the larger-sized pallet. The aligning gauge is drawn out to its full length; the spring stop ends are pushed in completely. The pile is aired, jogged and aligned in the tilted position; centreing is carried out according to the adjustment on the dial gauge. The pile centrally positioned on the pallet can be unloaded.

This device is available for models of the SWH series.



## Catwalk and telescopic control desk

A catwalk is available for pile turners of the SWH series 155 and 180 with airing to facilitate the handling of large-sized sheets in connection with the higher working position. The catwalk is equipped with a banister and stairway on both sides and is positioned at the rear of the pile turner. The removal of bad sheets and the shifting of pile sections towards the opposite aligning gauge can easily be made during the airing and aligning process. The telescopic slewable control desk facilitates the air volume adjustment while on the higher working position on the catwalk.

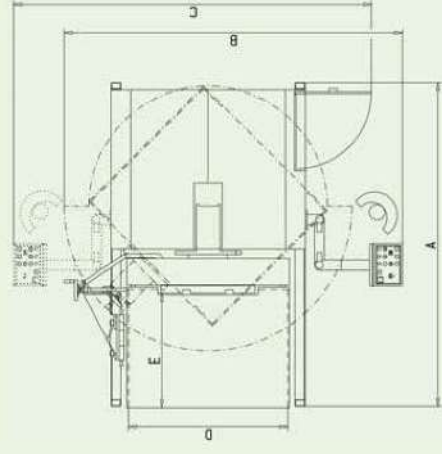
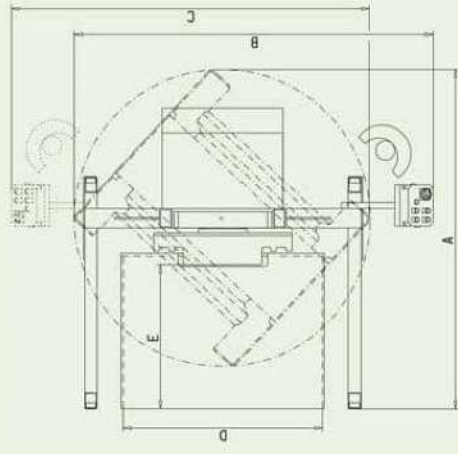
The catwalk is also available for pile turners of SWH series 125 with airing and enlarged opening height of the platforms.



Semi-automatic and fully automatic pile turners for turning, airing, aligning and jogging are offered for sheet sizes 800 x 1200 mm, 1060 x 1450 mm and 1220 x 1650 mm.

Detailed information can be sent on request.

Model Series		SE				SWH				
Model		SE 90	SE 90 RLA	SE 125	SE 125 RLA	SWH 90 LA	SWH 90 RLA	SWH 125 LA	SWH 125 RLA	
Max. sheet size	mm	600 x 750	600 x 750	800 x 1200	800 x 1200	600 x 750	600 x 750	800 x 1200	800 x 1200	
Features	Turning Airing Aligning Jogging	●	●●●●	●	●●●●	●●●●	●●●●	●●●●	●●●●	
Carrying power	kg	500	500	1000	1000	500	500	1200	1200	
Platform width (D)	mm	900	900	1250	1250	900	900	1250	1250	
Platform depth (E)	mm	620	620	900	900	625	625	900	900	
Max. pile height incl. 2 pallets	mm	1200	1200	1350	1350	1200	1200	1350	1350	
Min. pile height incl. 2 pallets	mm	290	290	380	380	540	540	650	650	
Power requirements (50 Hz)	kW	1.5	3.8	1.5	5.7	4.0	4.2	4.6	5.0	
<b>Equipment</b>										
● Standard ○ Option										
Pressure control flaps		○	○	○	○	●	●	●	●	
Airing number of air jets			2			2	2	2	2	
Aligning gauge			●			●	●	●	●	
Jogging			●			●	●	●	●	
Speed of air jets, continuously adjustable at the control desk			●			●	●	●	●	
Air volume regulation by hand lever at the machine body			●			●	●	●	●	
Air volume regulation, continuously adjustable at the control desk						○	○	○	○	
Additional blower for double airing power (50 Hz)						○	○	○	○	
Ionised air						○	○	○	○	
Enlarged opening height of platforms				○				○	○	
				1750				1750	1750	
<b>Space requirements</b>										
Length (A)		1700	1865	2120	2300	2180	2180	2690	2690	
Width Control desk, right (B)		1930	2200	2245	2415	2180	2180	2640	2640	
Width Control desk, left (C)		1930	2200	2245	2415	2400	2400	2800	2800	
Height incl. turning range		1745	1890	2060	2220	1790	1790	2090	2090	
Weight net		650	840	850	1100	1030	1055	1430	1495	



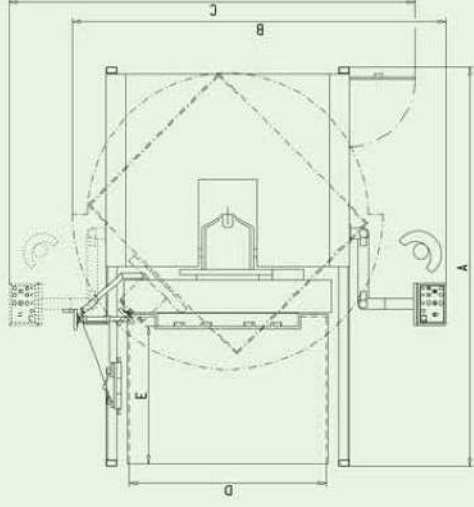


# Technical Data

Model Series		SWH		
Model		SWH 155	SWH 155 LA	SWH 155 RLA
Max. sheet size	mm	1060 x 1450	1060 x 1450	1060 x 1450
Features	Turning Airing Aligning Jogging	●	● ● ●	● ● ● ●
Carrying power	kg	1800	1800	1800
Platform width (D)	mm	1550	1550	1550
Platform depth (E)	mm	1080	1080	1080
Max. pile height incl. 2 pallets	mm	1600	1600	1600
Min. pile height incl. 2 pallets	mm	760	830	830
Power requirements (50 Hz)	kW	4,0	16,6	17,0
Equipment				
	● Standard ○ Option			
	Pressure control flaps	○	●	●
	Airing number of air jets		4	4
	Aligning gauge fixed adjustable		●	●
	Jogging			●
	Speed of air jets, continuously adjustable at the control desk		●	●
	Air volume regulation by hand lever at the machine body		●	●
	Air volume regulation, continuously adjustable at the control desk		○	○
	Additional blower for double airing power (50 Hz)			
	Ionised air			
	Enlarged opening height of platforms	○ 2000	○ 2000	○ 2000
Space requirements				
Length (A)	mm	3120	3120	3120
Width Control desk, right (B)	mm	2660	2985	2985
Width Control desk, left (C)	mm	2965	3180	3180
Height incl. turning range	mm	2525	2525	2525
Weight net	kg	2400	2750	2850

SWH		SWH 180	SWH 180 LA	SWH 180 RLA
Max. sheet size	mm	1220 x 1650	1220 x 1650	1220 x 1650
Features	Turning Airing Aligning Jogging	●	● ● ●	● ● ● ●
Carrying power	kg	1900	1900	1900
Platform width (D)	mm	1800	1800	1800
Platform depth (E)	mm	1235	1235	1235
Max. pile height incl. 2 pallets	mm	1600	1600	1600
Min. pile height incl. 2 pallets	mm	760	830	830
Power requirements (50 Hz)	kW	4,0	16,6	17,0
Equipment				
	● Standard ○ Option			
	Pressure control flaps	○	●	●
	Airing number of air jets		4	4
	Aligning gauge fixed adjustable		●	●
	Jogging			●
	Speed of air jets, continuously adjustable at the control desk		●	●
	Air volume regulation by hand lever at the machine body		●	●
	Air volume regulation, continuously adjustable at the control desk		○	○
	Additional blower for double airing power (50 Hz)			
	Ionised air			
	Enlarged opening height of platforms	○ 2000	○ 2000	○ 2000
Space requirements				
Length (A)	mm	3345	3345	3345
Width Control desk, right (B)	mm	2855	3185	3185
Width Control desk, left (C)	mm	3180	3380	3380
Height incl. turning range	mm	2645	2645	2645
Weight net	kg	2600	2950	3050



Model Series  
SWH 155 and SWH 180

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