

HANDLING SYSTEMS

# BoDo II The SAHM BobbinDoffer

Mobile, fully automatic doffing and transport system



WINDING SOLUTIONS



# BoDo II The SAHM BobbinDoffer

## Next generation workflow

In its latest generation, the mobile, fully automatic doffing and transport system BoDo II is once again setting new standards in bobbin and tube handling. The pick-up of bobbins at the winding machine as well as the set-up with empty tubes is performed entirely automatically – just like the transport of bobbins and their delivery to freely defined locations in the production workflow.

Working with centralized fleet management software, BoDo II robots operate as genuine team players and enable continuous 24/7 operation with an outstanding level of efficiency.

### Leading the way

#### Exact positioning

With its integrated sensors and cameras, BoDo II perceives its surroundings and independently selects the most efficient route. Obstructions in the floor surface or areas that cannot be properly navigated can be easily defined in the software and will be bypassed by BoDo II.

### Full flexibility

#### Freely definable radius of movement

Whether defining driving routes or pick-up and delivery points for bobbins and tubes - BoDo II is freely programmable and can be adapted to any production environment. With identical plant design, BoDo II units can even be exchanged between plants for cross-plant use.

### Network integration

#### Intelligent fleet management

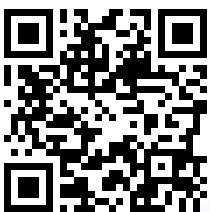
BoDo II robots communicate with SAHM winding machines and are linked via intelligent fleet management software. This networking enables fully optimized logistic and process workflows for the realization of a Smart Factory environment.

### Safe and secure

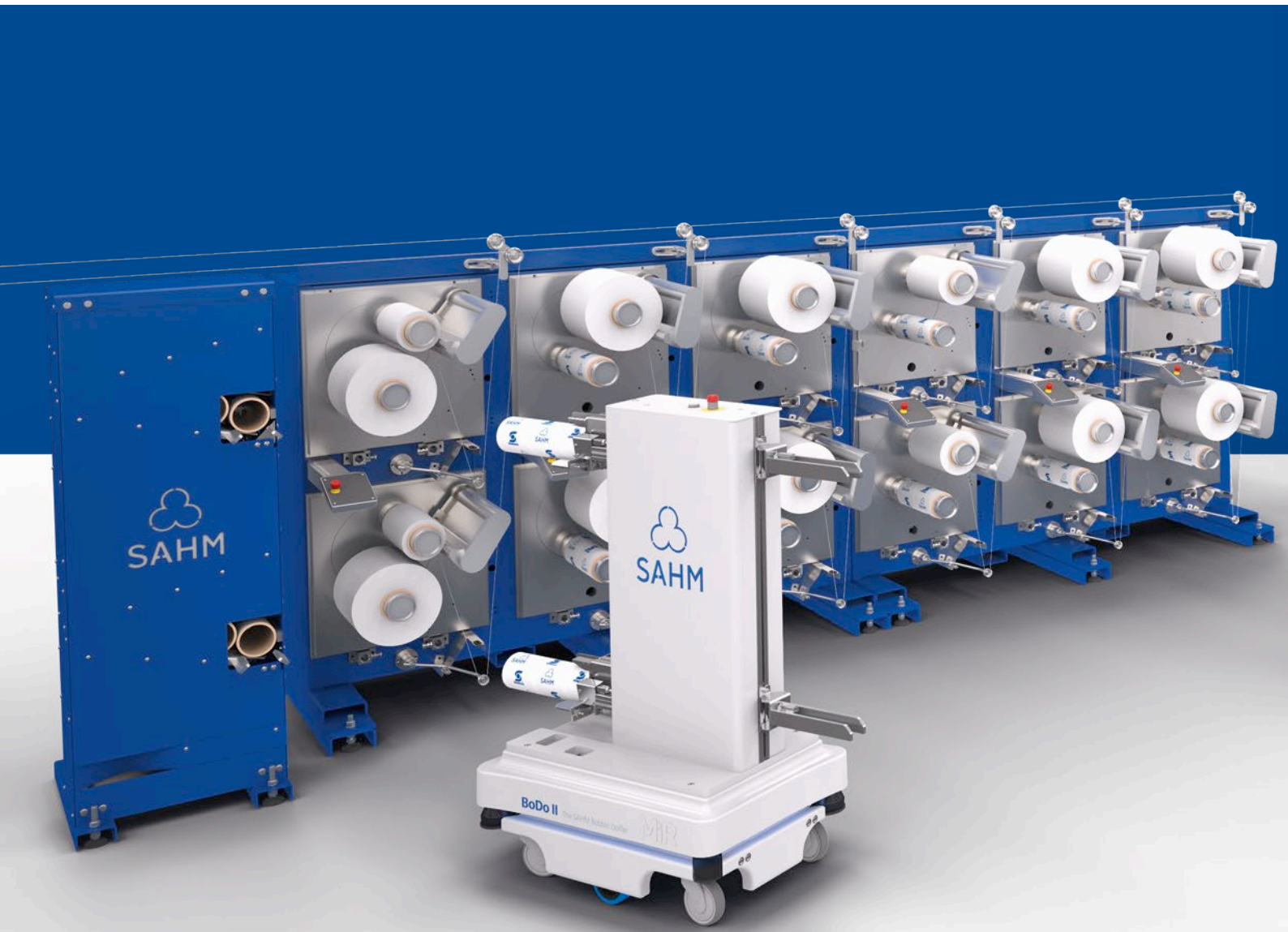
#### 360° environment detection

As a collaborative system, BoDo II ensures safe operation in conjunction with people, vehicles and machines. Two integrated safety laser scanners continuously monitor the surroundings and provide BoDo II with all safety-relevant information. When an obstacle is detected, BoDo II reacts on the basis of the actual real-time situation. Not being bound to a track, BoDo II can simply drive around the obstacle, search for an alternative route or stop immediately, if required in an emergency situation. And all of this is done fully autonomously – without operator involvement.





Experience BoDo II in action:  
[www.sahmwinder.com/bodo2](http://www.sahmwinder.com/bodo2)



## » TUBE PICK-UP

Waiting for doffing request, driving to tube depot, pick-up of empty tube(s).



## » BOBBIN DOFFING

Driving and positioning at winding machine to collect full bobbins. Waiting for the doffing signal. Safe and sure bobbin collection.



## » TUBE PLACEMENT

Placement of empty tubes on the winder.





## Bobbin handling. 24/7. Fully automatic.

Bodo II is the innovative solution for fully automatic bobbin and tube handling. It can be flexibly integrated into existing processes and enables round-the-clock operation. Physical strain on operators is reduced, processes are optimized – all with increased speed, efficiency, cost-effectiveness and ergonomic optimization.

### » BOBBIN DELIVERY

Transport and delivery of full bobbins to a suitable receiving system (e.g. creel trolley).



### » CHARGING

Automatic navigation to the waiting position or – when the battery is low – to the charging station.



### » FLEET MANAGEMENT

Simple programming and control of the BoDo II fleet via the intuitive, web-based user interface on desktop, tablet or smartphone.



# BoDo II The SAHM BobbinDoffer

## Mobile, fully automatic doffing and transport sys

### ● FEATURES ○ OPTIONS

- Simultaneous removal/placement of multiple bobbins\*)
- Two safety laser scanners for 360° environment detection
- Autonomous, trackless driving
- Intelligent fleet management system
- Teaching of bobbin doffer via mobile device
- Creel trolley
- Tube depot
- Possibility of integration into DCS (Distributed Control System)

\*) with 2 and 3-tier models

### APPLICATIONS

Continuous processes in combination with automatic SAHM winding machines, e.g.: TWINSTAR II (others on request)



25 kg/Bobbin



1 m/s



10 h | 1 h

- 1 Emergency stop
- 2 Bobbin take-up position
- 3 Tube take-up position
- 4 Ultrasonic sensors (2 x front, 2 x rear)
- 5 Safety laser scanners (1 x front, 1 x rear) for 360° environment detection
- 6 LED status strip
  - Executing task
  - Waiting for task
  - Charging
- 7 3D depth camera (2 x front)



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## TECHNICAL DATA

	BoDo II 1 tier	BoDo II 2 tiers	BoDo II 3 tiers
Load capacity	25 kg	50 kg	75 kg
Speed	1 m/s (loaded)	1 m/s (loaded)	1 m/s (loaded)
Battery runtime	7 h (charging time 2 h)	7 h (charging time 2 h)	10 h (charging time 1 h)
Safety features	Safety laser scanners, 3D cameras		
Tiers	1	2	3
Navigation	Automatic selection of most efficient route without track		
Tube inside diameter	94 mm*)	94 mm*)	94 mm*)
Tube outside diameter	100 - 108 mm*)	100 - 108 mm*)	100 - 108 mm*)
Tube length	290 mm*)	290 mm*)	290 mm*)

\*) others on request

Combination of all maximum values is not possible.



## Scalable

### Solutions for any production capacity

BoDo II is a flexible, scalable system which offers a suitable solution for every production operation and for any output. Whether operating singly or with multiple networked BoDo II units – the system can be individually adjusted to all customer requirements and process details. And can be modified as required – making BoDo II the perfect future-proof choice.



Enlarging our focus.  
For exciting solutions.

Constructing winders that are among the world's best requires a comprehensive approach to systems and processes. This know-how is a special strength of SAHM. Our sales team, our partners, our agents and, not least, our development department engage in direct dialogue with our customers, seeking to work out the best possible solutions for their individual requirements.

The mutual exchange of know-how and experience, always on an equal footing, opens up new perspectives and new possibilities for all parties involved. Out of this trusting co-operation arise pioneering technological developments which make our customers' processes simpler and more efficient – thereby giving you a competitive edge.



Design, configuration and scope of supply are subject to change without notice and errors are accepted. Drawings/photos not binding.



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