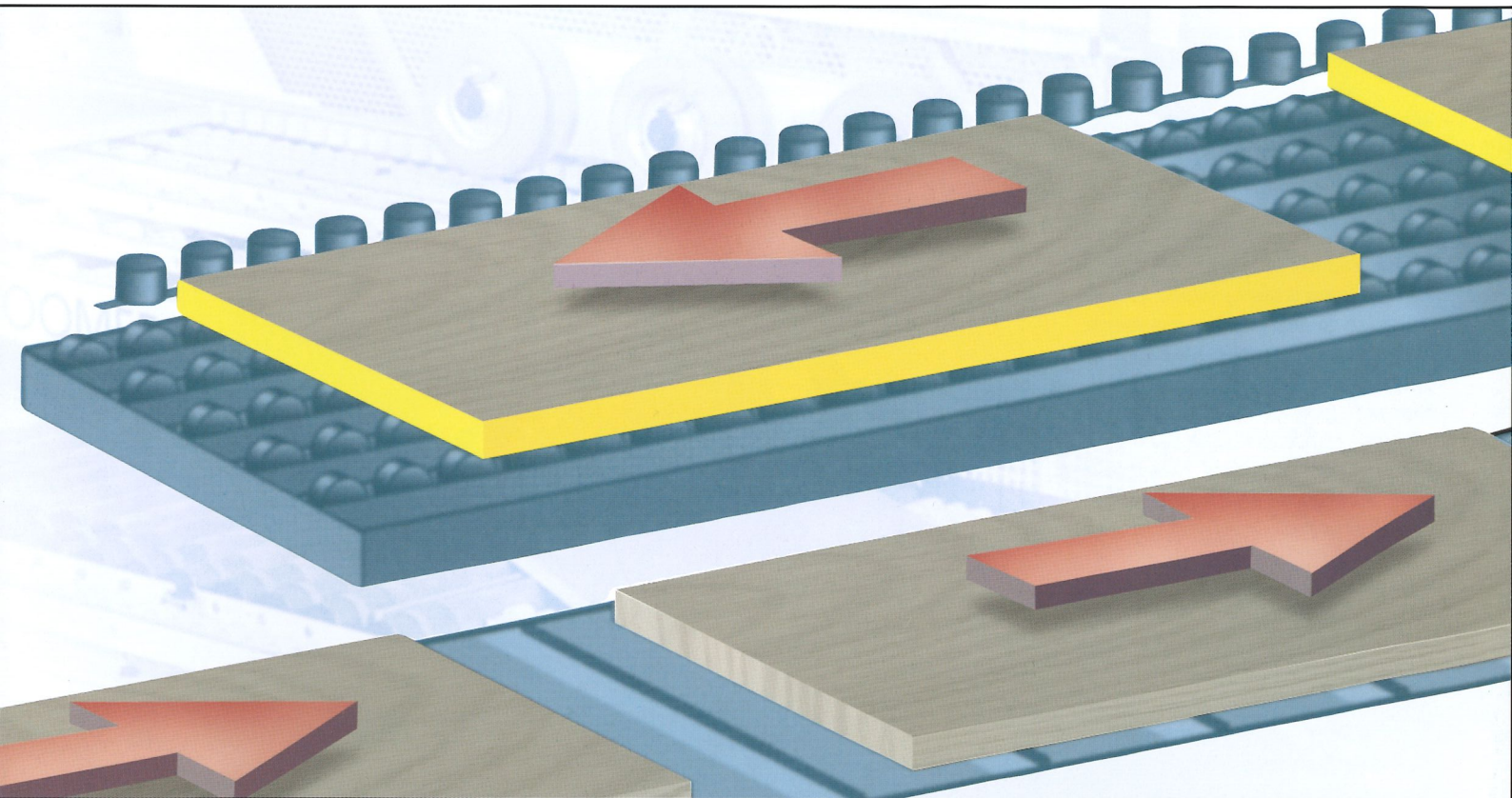
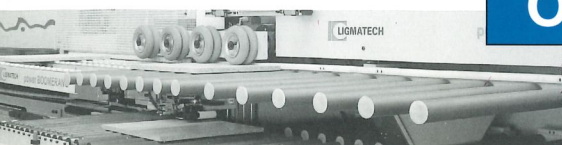


Return conveyors BOOMERANG®



**Machines that return quickly and efficiently
pay off in a trice.**

Optimat | profi line | power line



ZHR 02
NG BONSAI

To and from in a jiffy. No problem for the BOOMERANG®!

The decision to invest in a machine that is able to handle heavy and bulky workpieces is usually made in no time at all – even if the price of the machine is relatively high. The same applies when producing large numbers on a series production machine. However, if you have small to medium batch sizes that need to be processed frequently and still have to handle them manually, or if the floor space conditions are not optimal, the decision to invest becomes much more difficult to make. Ligmatech offers conveying and handling equipment that needs little space, yet provides amazing performance. The return on the investment is soon recovered: the series ZHR with its flagship, the “BOOMERANG® ZHR 15”.

All materials

The ZHR series handles all surface materials simply and safely.

No marking problems

After being machined, the workpiece is lifted using a lifting station to bring the panel to the height of the return mechanism of the ZHR 15 / ZHR 16. Driving rollers start the return, and the workpiece rolls easily back to the operator on a downhill slope. For return conveyors of more than 5 m long, an intermediate drive belt has been integrated.

Single operator control

You don't need a second operator at the BOOMERANG® any longer – you can assign him to other more important tasks.

Universal or specific

The models of the ZHR series can be used either universally – on edge-banding machines, edge sanding machines, hot stamping/foiling machines, surface sanding machines, planing machines, and moulding machines, or they are designed for specific individual tasks.



BOOMERANG® ZHR 01

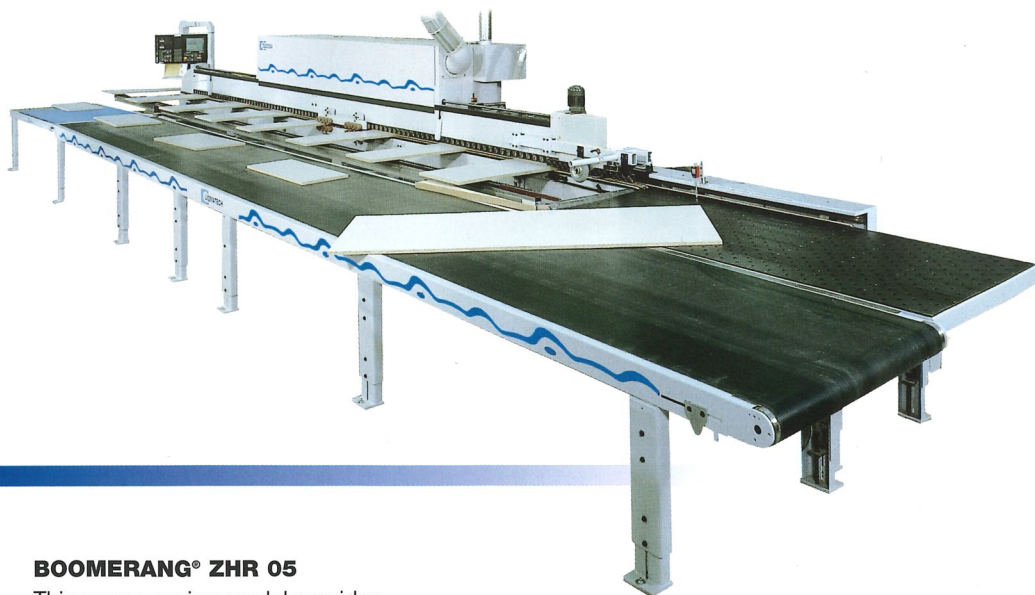
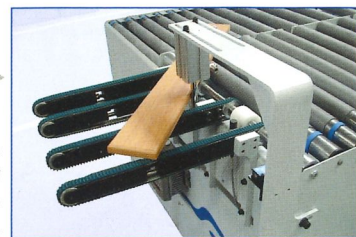
This is the entry level and most economical model, and works well for quick and efficient conveying and handling for machine lengths from 4.5 m to approximately 7.0 m.

Suitable for the following work dimensions, without turning the workpiece:

length (mm)	300 (12") - 2,500 (98")
width (mm)	50 (1.97") - 1,500 (59")
thickness (mm)	8 (0.31") - 60 (2.36")
weight (kg)	max. 50

Weight for part lengths of up to 700 mm: max. 30 kg

*Additional device
for ZHR 01 and
ZHR 02 for turning
of small parts*



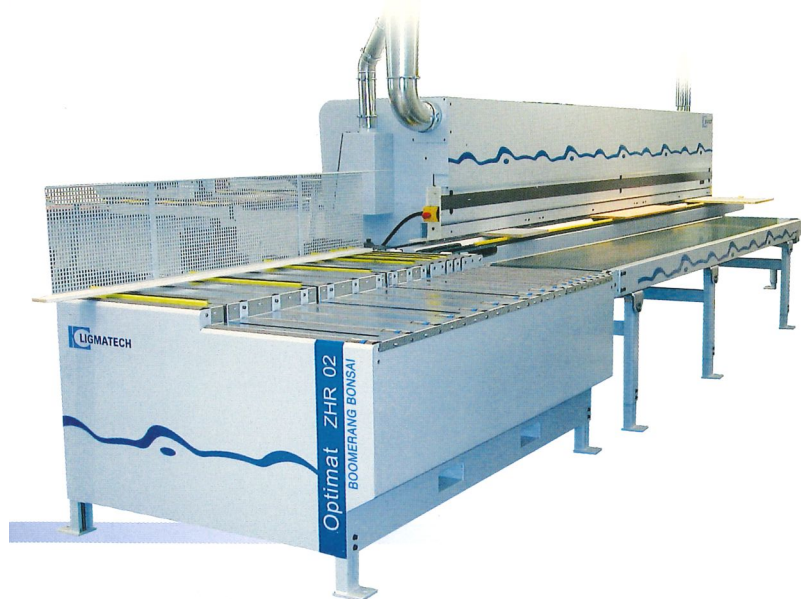
BOOMERANG® ZHR 05

This space-saving model provides convenient conveying and handling technology which can be used universally on edgebanding, sanding, and hot stamping/foiling machines.

Suitable for the following work dimensions:

length (mm)	300 (12") - 2,000 (79")
width (mm)	50 (5,9") - 800 (31")
thickness (mm)	8 (0.31") - 60 (2.36")
weight (kg)	max. 50

... now also available with a longer table for lengths up to 2,600 mm (102")



BOOMERANG® ZHR 02 BONSAI

The space-saving version of the ZHR 01 with a reduced width by 800 mm

Suitable for the following work dimensions, without turning the workpiece:

length (mm)	300 (12") - 2,500 (98")
width (mm)	50 (1.97") - 900 (35")
thickness (mm)	8 (0.31") - 60 (2.36")
weight (kg)	max. 50

Weight for part lengths of up to 700 mm: max. 30 kg

ZHR 15/16 suitable for the following work dimensions:

without turning

length (mm)	300 (12") - 2,500 (98")
width* (mm)	60 (2.36") - 1,000 (39")
thickness (mm)	10 (0.39") - 60 (2.36")
weight (kg)	max. 50

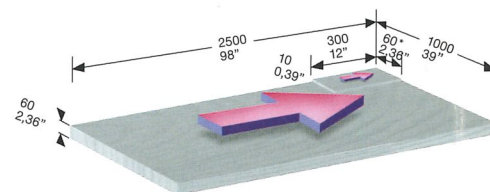
with turning

length (mm)	300 (12") - 2,200 (87")
width* (mm)	120 (4.7") - 800 (31.5")
thickness (mm)	10 (0.39") - 60 (2.36")
weight (kg)	max. 30

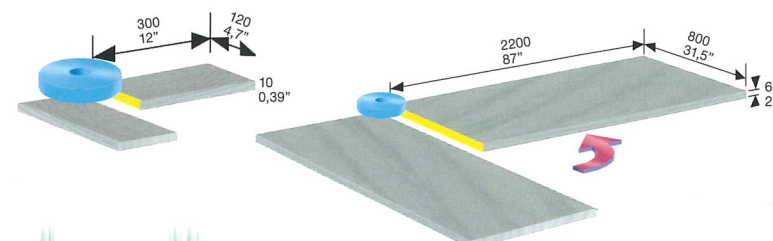
* without turning 100 mm (3.9") - 1,000 mm (39.4") with ZHR 16

Minimum and maximum workpiece dimensions for the ZHR 15/16

For length processing:



For cross processing:

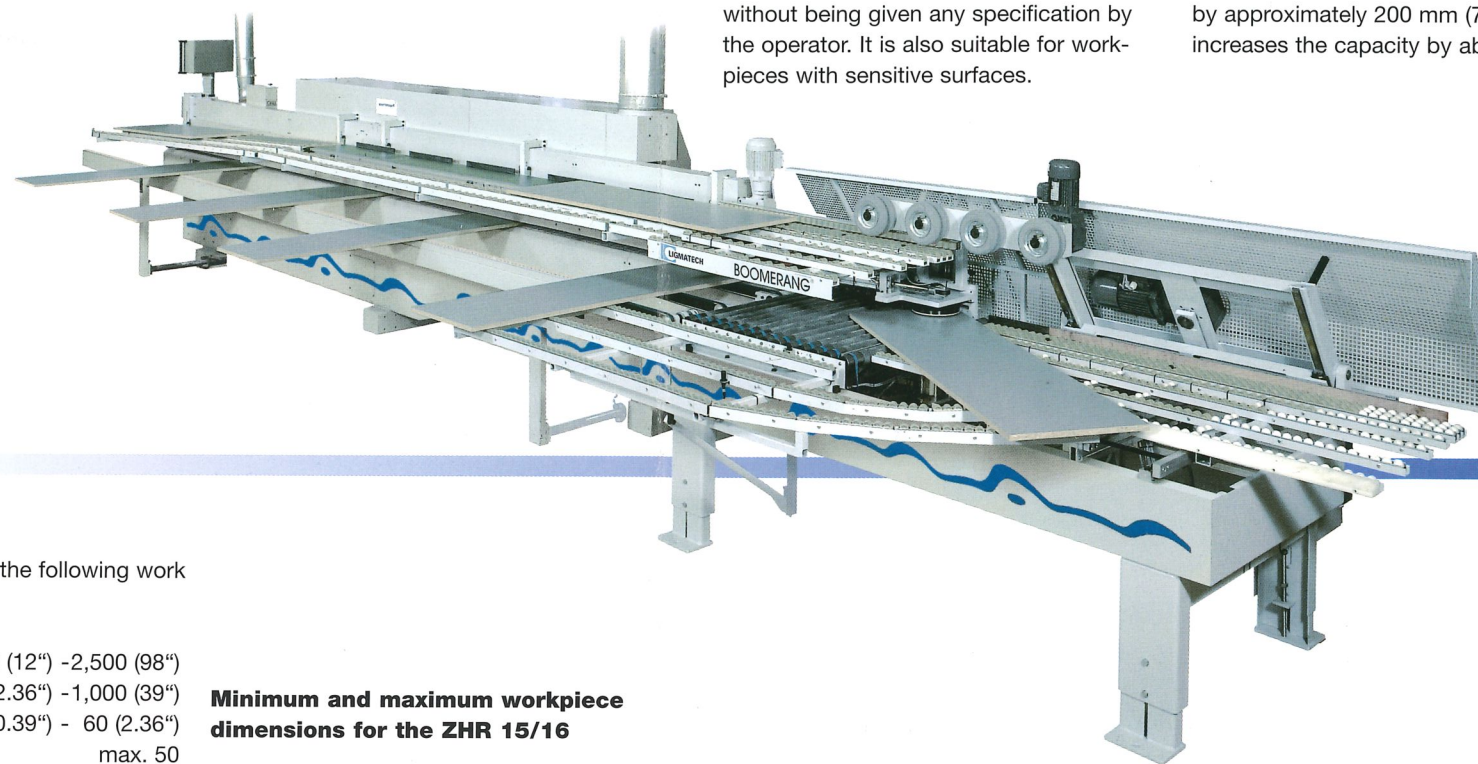


BOOMERANG® ZHR 15

The BOOMERANG® that solves all tasks with ease. The ZHR 15 "identifies" the different lengths and widths of the pieces and controls the machine automatically – without being given any specification by the operator. It is also suitable for workpieces with sensitive surfaces.

A best seller – improved upon

The BOOMERANG® ZHR 15 that has led the industry for 8 years is replaced by a new design solution, which reduces the distance between the pieces by approximately 200 mm (7.8"). This increases the capacity by about 15%.



A little stroke of genius

The trick: A BOOMERANG® returns the machined part directly to the operator – but 20 cm (7.8") higher. The workpiece is returned and executed on a second track – which is situated above the feeder.

No additional floor space required

Because the BOOMERANG® requires no extra floor space, the return conveyor can be installed in exactly the same place as the workpieces are now stored.

The following devices are already integrated in the basic machine ZHR 15 / ZHR 16:

- Special narrow-part device for workpieces with a minimum width of 60 mm
- Rotary table control with dual purpose:
 - for the automatic identification and turning of the parts from cross to length (for the constant change between the machining of cross edges and the machining of longitudinal edges in large production runs and smaller batch size production).
 - automatic adaptation to the length of the workpiece. Short workpieces are turned quickly. Long workpieces are turned more slowly. The approximate distance between pick-up and placing is about 1,300 mm (51"). A sensor identifies the length of the workpiece and automatically slows down the turning movement.

For a trouble-free return, cross processed workpieces (up to max. 30 kg and a thickness of 60 mm/2.36") are turned in a longitudinal direction after the machine processing.

Special accessories for special requirements:

- Motorized upper pressure adjustment for frequent changes of panels with different thicknesses, eliminates manual adjustment by your operator.

People can make mistakes – the BOOMERANG® discovers them!

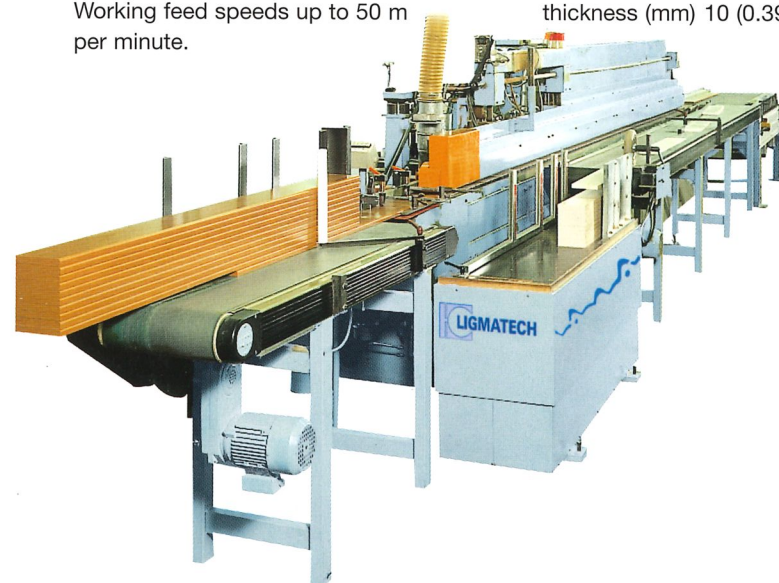
- If, by mistake,
- the necessary distance between the parts is not observed,
 - the upper-pressure element is not raised for thicker workpieces,
 - or the turning device is not switched off for workpieces that are too long, the feed at the edge processing machine stops.

BOOMERANG® ZHR 20 based on ZHR 02

A compact solution for returning narrow parts on single-sided edgebanding and edge sanding machines – in continuous operation. Working feed speeds up to 50 m per minute.

Suitable for the following work dimensions:

length (mm)	250 (9.8") - 2,500 (98")
width (mm)	50 (1.97") - 350 (13.8")
thickness (mm)	10 (0.39") - 60 (2.36")



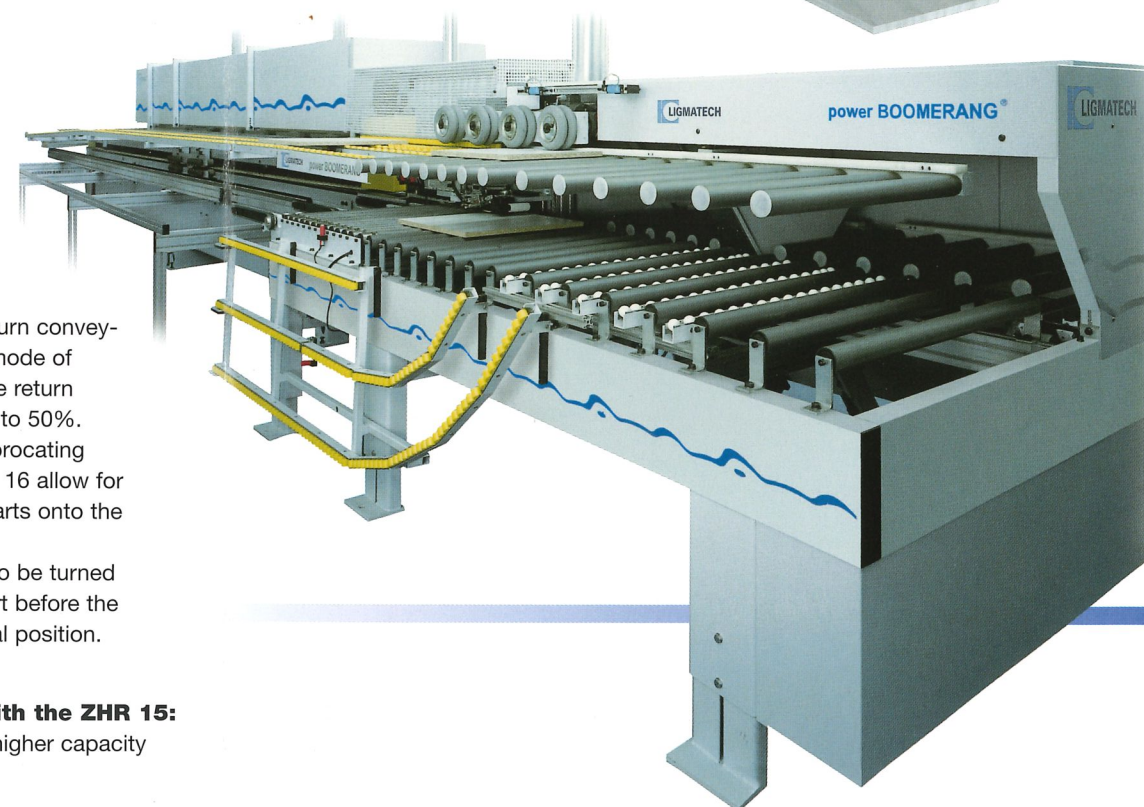
BOOMERANG® ZHR 16

Now even more power in return conveying – thanks to a two-table mode of operation, the capacity of the return conveyor is increased by up to 50%. During the process, the reciprocating tables at the rear of the ZHR 16 allow for the continuous flow of the parts onto the lifting table.

In addition, the parts can also be turned so that they are ready to start before the table has returned to its initial position.

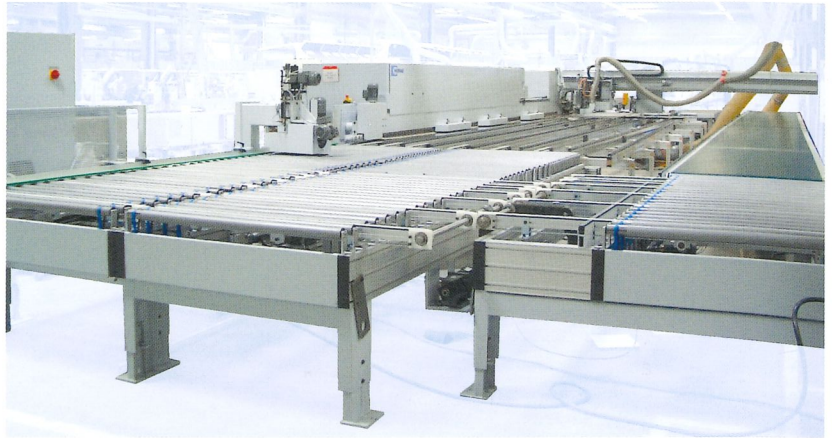
Advantages compared with the ZHR 15:

Less gap between parts = higher capacity



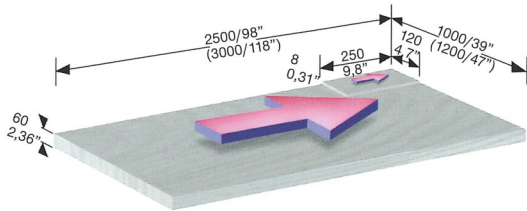
Boomerang® ZHR 10

- A functional special return conveyor for
- single-sided edgebanding machines with larger workpiece dimensions
 - one-and-a-half-sided edgebanding machines
 - double-sided edgebanding machines
 - surface and edge sanding machines
- The ZHR 10 automatically controls different lengths and widths of the parts without any specification given by the operator. It also handles and conveys workpieces with sensitive surfaces.

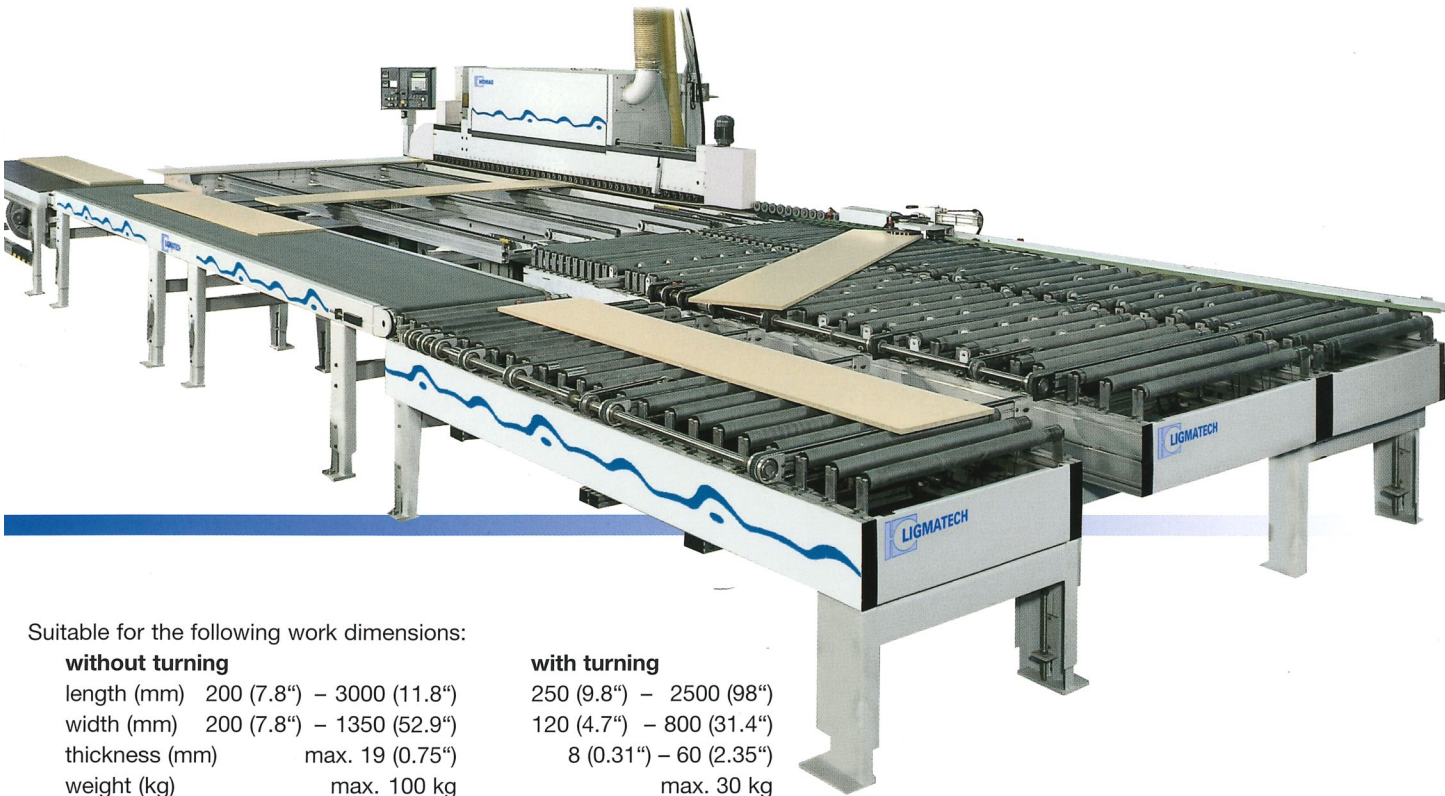
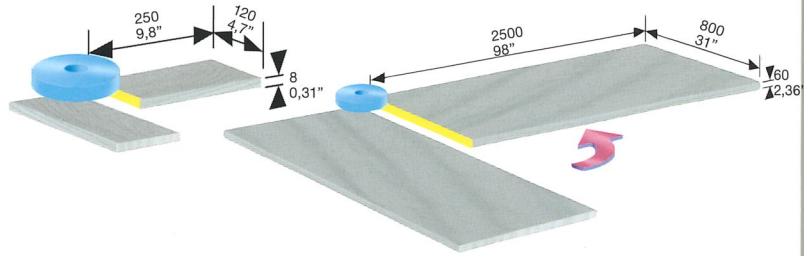


Minimum and maximum work dimensions for the ZHR 10

For length processing:



For cross processing with following turning:



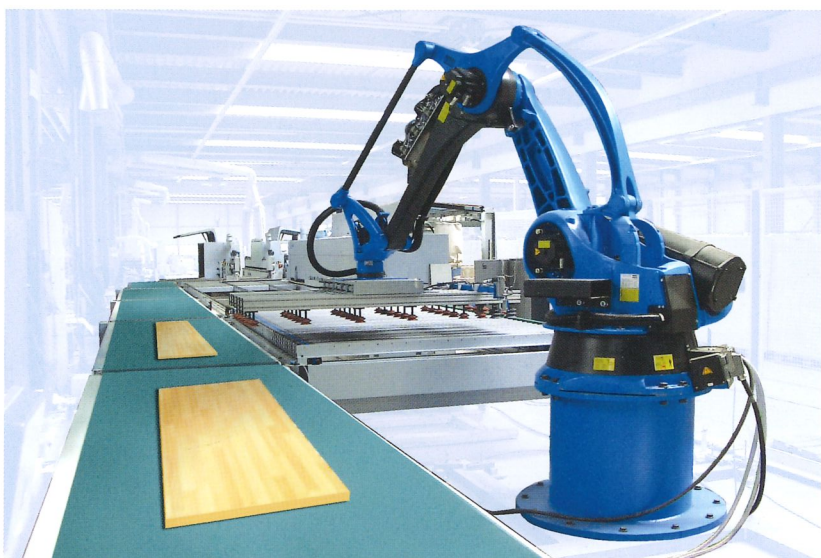
Suitable for the following work dimensions:

without turning

length (mm) 200 (7.8") – 3000 (11.8")
 width (mm) 200 (7.8") – 1350 (52.9")
 thickness (mm) max. 19 (0.75")
 weight (kg) max. 100 kg

with turning

250 (9.8") – 2500 (98")
 120 (4.7") – 800 (31.4")
 8 (0.31") – 60 (2.35")
 max. 30 kg



Efficient and flexible:

ZHR 10 in combination with a robot

Combining the ZHR 10 with a robot provides a particularly economical solution – perfect for large, heavy parts such as partition panels or for already edged components. This arrangement allows the robot to perform the following tasks at up to 10 cycles per minute:

- Transferring parts from the outfeed table to the return feed belt
- Stacking parts off the outfeed table to the finished part stack
- Feeding from the stack onto the return feed belt

There are four selection modes to choose from to ensure maximum flexibility and efficient application:

- Mode 1: Large series
- Mode 2: Small series and repair jobs
- Mode 3: Outsize parts (length up to 3500 mm)
- Mode 4: One pass only

Technical changes reserved

Member of the HOMAG Group



System supplier for

- Return systems
- Assembly technology
- Packaging technology
- Robot technology

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