



# MSR II

CALIBRATION AND ORBITAL SCRATCH REMOVAL

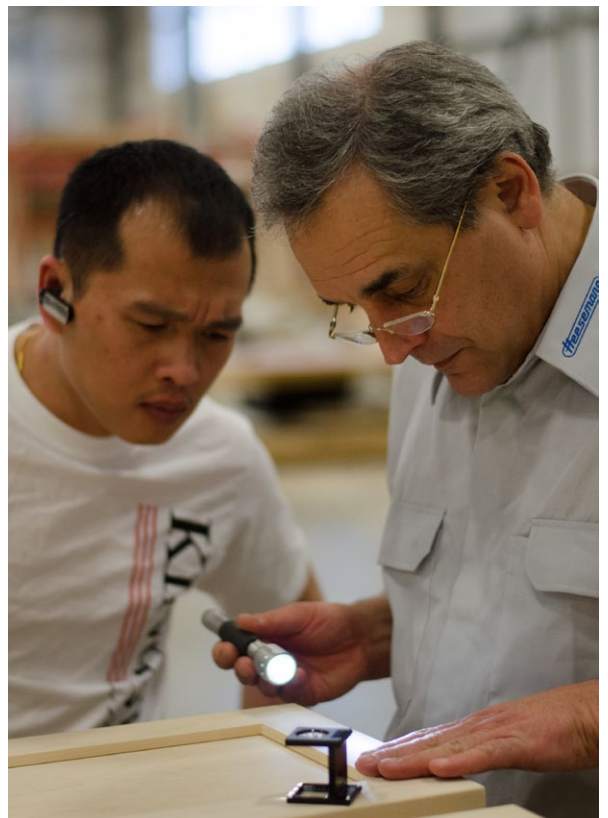


# REMOVAL OF SANDING SCRATCHES USING HEESEMANN OSR™ UNIT

When sanding frames and other work pieces with different grain directions sanding against the grain direction cannot be avoided. The generated scratch patterns are very evident, especially when dark stains are used. The Heesemann orbital sanding unit removes these scratches and leaves a clean surface with no visible scratches.

Kingswood Interior Ltd. in Calgary is one of many customers in North America being committed to the advantages of this Heesemann technology.

OSR II combines both, a calibrating machine and orbital scratch removal (OSR) units, in one machine. Irregularities of thickness from glued connections and remains of glue are removed by two or three contact rollers. Due to the succession of a steel contact roller and one or two rubber-coated contact rollers the scratches from the abrasives continuously become finer. The longitudinal sanding unit with a chevron belt makes them even finer. The optional RUT disk brush unit removes sharp edges from the work pieces. Finally two OSR units remove all visible sanding marks. In order to minimize vibrations in the calibration process produced by OSR units the contact rollers and the OSR units are mounted on separate supports.

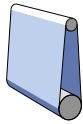


*Heesemann sales manager Heinz Grupe and a staff member of Kingswood survey the final result using a flashlight and a magnifier.*

A close-up photograph of a light-colored wooden workpiece, possibly a piece of plywood or a similar material, showing fine sanding traces on its cross-grained surface. The wood grain is visible, and the surface has a smooth, slightly textured appearance. The lighting is soft, highlighting the texture of the wood. A dark blue text box is overlaid on the bottom left of the image.

AFTER CALIBRATION SANDING TRACES ON THE  
CROSS GRAINED PARTS OF THE WORK PIECES  
ARE VISIBLE.

# CALIBRATION AND FINE SANDING



## **Steel contact roller (P80 $AL_2O_3$ )**

Removal of irregularities of thickness from glued connections and remains of glue.



## **Rubber-coated roller (65° shore, P120 $AL_2O_3$ )**

Removal of sanding marks generated by the P80 abrasive.



## **Rubber-coated roller (55° shore, P150 $AL_2O_3$ )**

Removal of sanding marks generated by the P120 abrasive.



## **Longitudinal unit with chevron belt (P220 SiC)**

SiC should be scattered openly. Removal of sanding marks generated by the P150 abrasive, preparation for minimization of deep sanding marks.





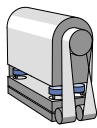
HEESEMANN OSR UNIT EFFECTIVELY REMOVES  
ALL VISIBLE SCRATCHES AND GENERATES A  
HARMONIOUS SURFACE.

# REMOVAL OF SCRATCHES



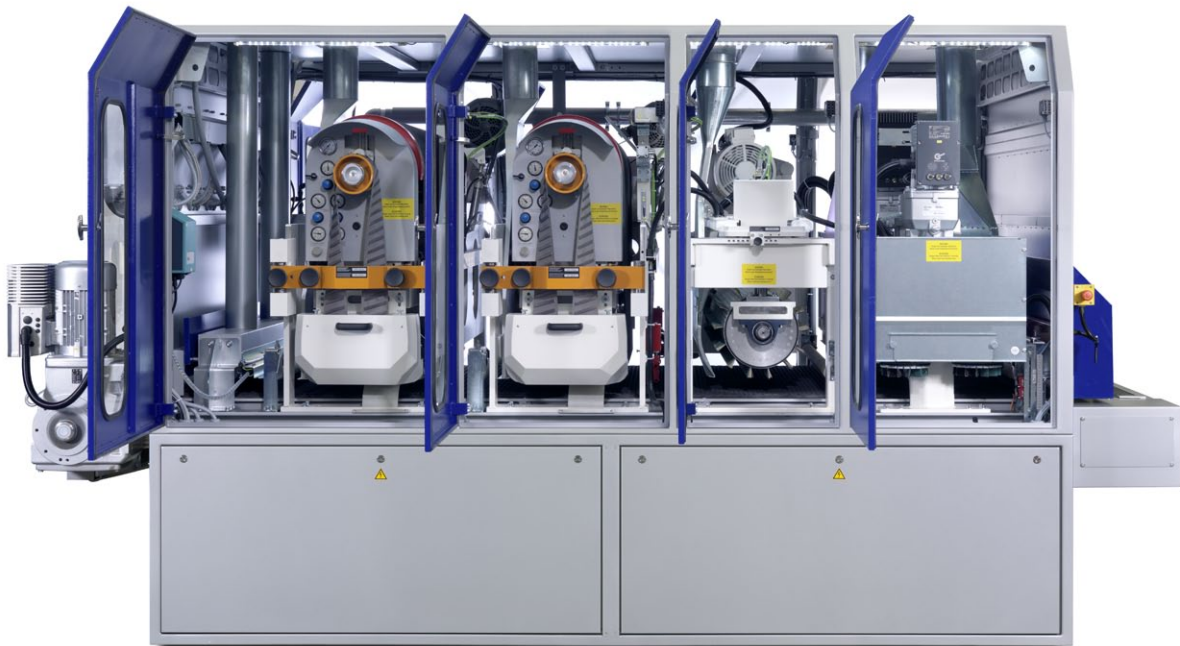
## **OSR - Orbital scratch removing (P180 AL<sub>2</sub>O<sub>3</sub>)**

Removal of sanding marks crosswise to the grain with a large orbit.



## **OSR - Orbital scratch removing (P220 AL<sub>2</sub>O<sub>3</sub>)**

Generation of final fine sanded result with a small orbit.





THE HESEMANN CONTACT ROLLER UNITS ARE OFFERED WITH STEEL ROLLERS AS WELL AS WITH RUBBER-COATED ROLLERS IN DIFFERENT SHORE HARDNESSES.



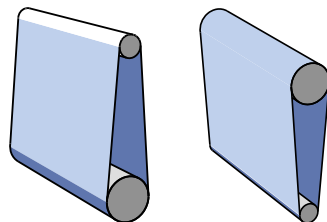
# HEESEMANN CONTACT ROLLER UNIT

The Heesemann contact roller units are offered with steel rollers as well as with rubber-coated rollers in different Shore hardnesses. Both types are deliverable with different roller diameters.

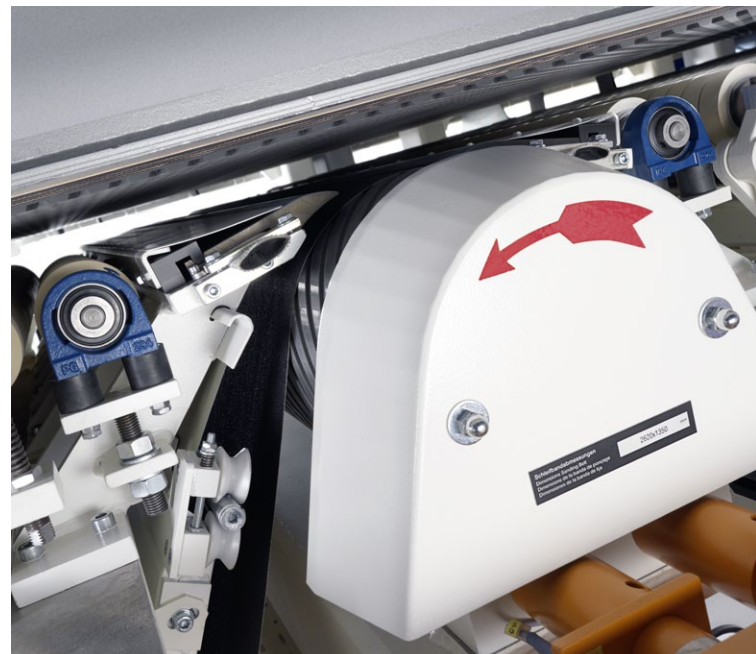
The contact roller unit with a 250 mm steel roller allows the exact calibration of materials like solid wood, particle board, MDF or plastics. The surface of the roller is grooved in a spiral shape. This allows a better cooling of the roller and makes it easier to extract the generated abrasive dust.

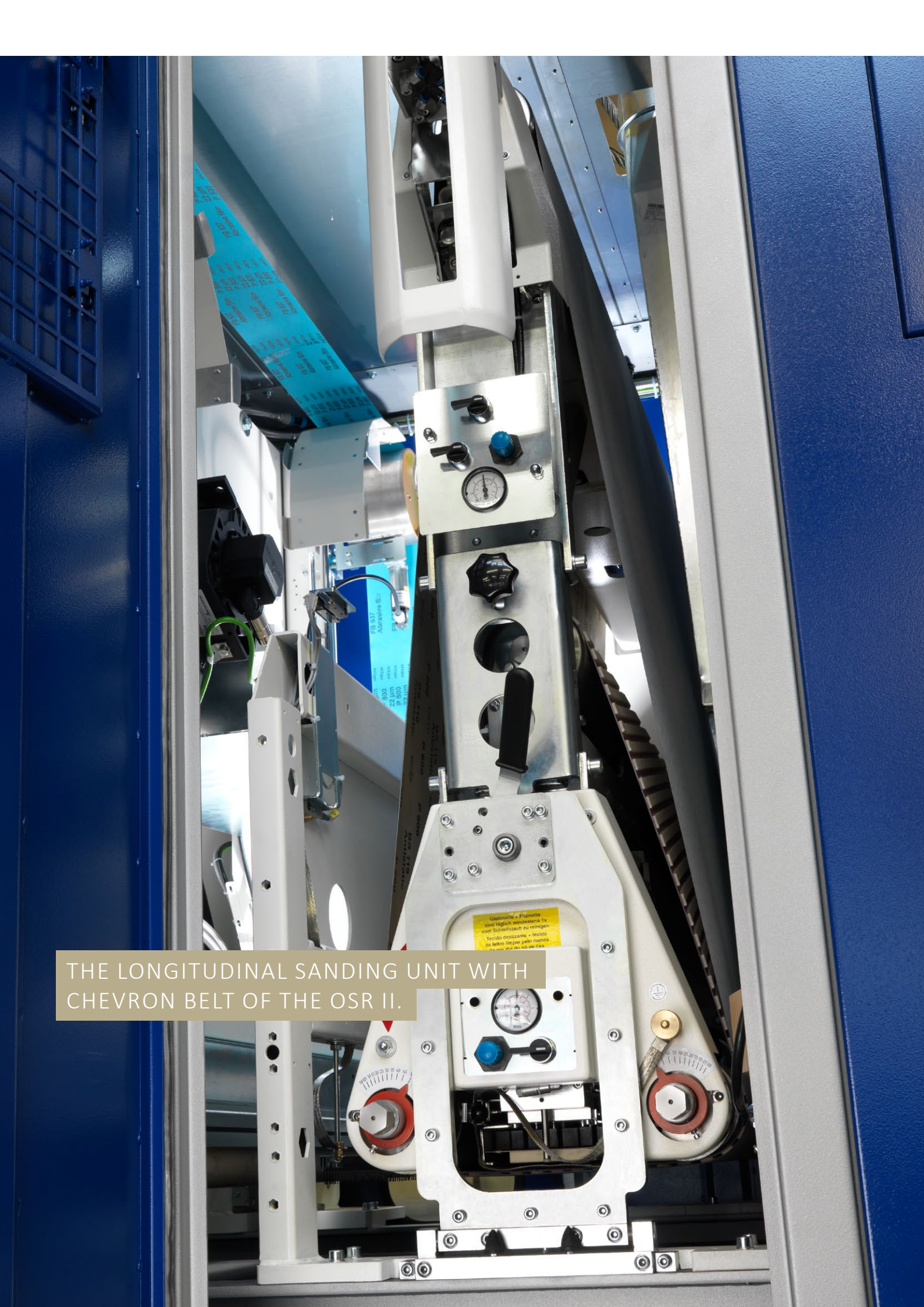
Contact roller units with rubber-coated rollers can be delivered as well. Depending on their Shore hardness they can be used for varying sanding tasks.

The contact roller unit can be equipped with different kinds of hold down elements depending on the requirements of the application.



*The contact roller unit can be equipped with different kinds of hold down elements depending on the requirements of the application.*





THE LONGITUDINAL SANDING UNIT WITH CHEVRON BELT OF THE OSR II.

# HEESEMANN

## LONGITUDINAL SANDING UNIT

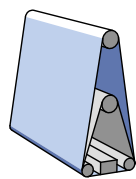
A longitudinal sanding unit with an optimized distance between the lower driven drums allows a large amount of a freely suspended sanding belt for a highly flexible pressure onto the work piece. This way a smooth sanding and high working speeds are achieved.

The longitudinal sanding units are available for sanding belts with belt lengths of 2 620 mm (103").

The **longitudinal unit with an internally running chevron belt** is a reasonable addition to many applications. The pressure segment belt interrupts the abrasive scratch lines of the sanding belt grit and thus offers a much better blended and even sanding scratch pattern.

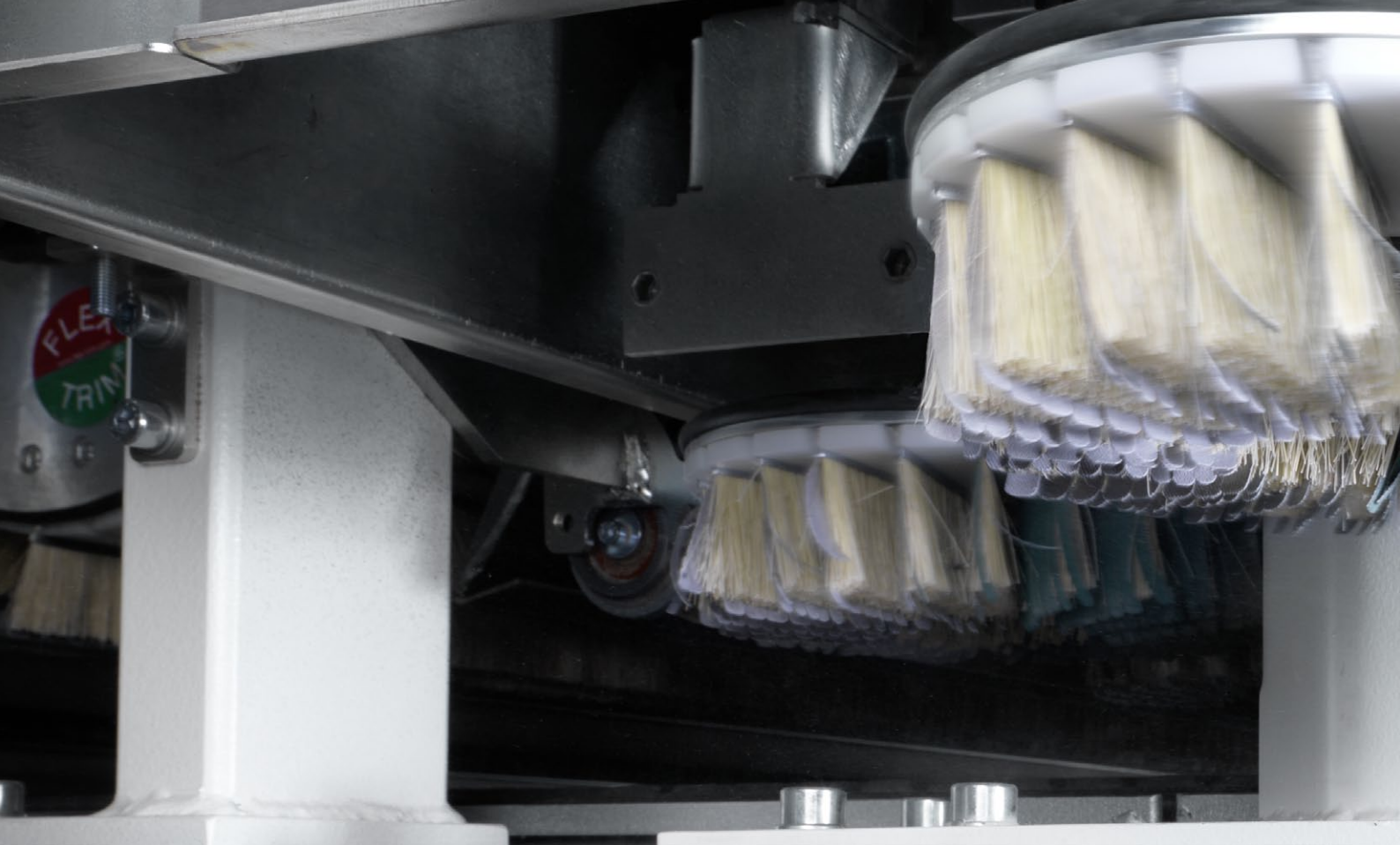
If a particularly fine grit is being used for lacquer sanding, the pressure segment belt may significantly increase the lifetime of the abrasive material.

Two eccentrics are located on the unit to allow the guide drums to be readjusted in accordance with the wear of the pressure segment belt. This compensates for the thickness of the pressure segment belt, and its lifetime is extended many times over.



*The longitudinal sanding unit is equipped with the Heesemann CSD® system that has proven its worth for more than 25 years.*





## HEESEMANN RUT DISC BRUSH UNIT

The RUT disc brush unit consists of 19 disc brushes. Their arrangement allows the sanding of contours with unparalleled quality. All areas of the work piece are evenly sanded in every direction.

The frequency controlled drive system permits continuous regulation of the disc brushes rotation speed, and their orbital velocity perpendicular to the feed direction.

The disc brushes can be equipped with two different abrasives at the same time. Thus the RUT unit can sand with different grits running with and against feed direction.

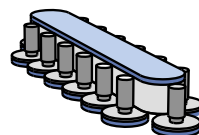
Due to an innovative quick changing device, replacing the disc brush heads abrasive brush inserts with new abrasives or with structuring brushes can be done with a few handles and very little time.



THE RUT DISC BRUSH UNIT CAN BE EQUIPPED WITH DISC BRUSH HEADS WITH DIFFERENT ABRASIVE BRUSH INSERTS OR STRUCTURING BRUSHES.



*Due to the quick changing device replacing the disc brushes can be done within a few minutes.*





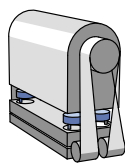
THE ORBITAL SANDING UNIT IS DESIGNED FOR FINE SANDING OF WORK PIECES WITH CROSS OR LONGITUDINAL GRAIN (KITCHEN DOORS OF SOLID WOOD) AND TO SIGNIFICANTLY REDUCE THE SANDING TRACES PRODUCED BY CROSS AND LONGITUDINAL BELTS.

# HEESEMANN OSR ORBITAL SANDING UNIT

When sanding frames and other work pieces with different grain directions sanding against the grain direction cannot be avoided. The generated scratch patterns are very evident, especially when dark stains are used. The Heesemann orbital sanding unit removes these scratches and leaves a clean surface with no visible scratches.

The unit works based on a variable speed, single eccentric orbit with a big diameter. An additional chevron belt system moves between the pressure beam and a vibrating sanding belt perpendicular to the feed direction.

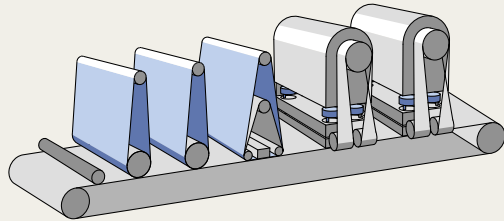
The scratch pattern of the vibrating sanding belt is interrupted and a blended sanding result is achieved without any obvious random sanding scratches.



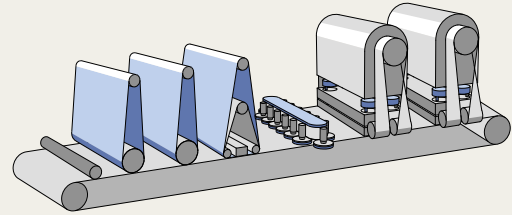
*The static sanding belt of the orbital sanding unit OSR can be moved after a certain amount of sanding is done, all at the push of a button.*



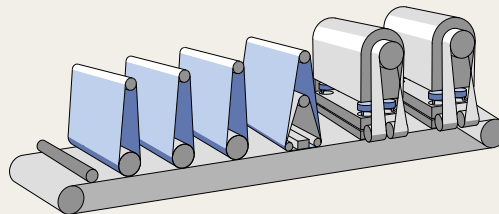
# MACHINE CONFIGURATIONS FREQUENTLY CHOSEN



**OSR II R / R / Lef / OSR / OSR**



**OSR II R / R / Lef / Rut / OSR / OSR**



**OSR II R / R / R / Lef / OSR / OSR**

## TECHNICAL DATA OSR II

Machinery base: Working height 880 mm (2,89 ft) / Working width 1 350 mm (4,43 ft)

W 2 300 mm (7,55 ft) H 2 250 mm (7,38 ft)	Length (mm)	Weight (kg)	Feed speed (m/min)	Suction power	
				(kW)	m <sup>3</sup> /min)
<b>R / R / Lef / OSR / OSR</b> <b>R / R / Lef / RUT / OSR / OSR</b> <b>R / R / R / Lef / OSR / OSR</b>	approx. 4 800 (13,78 ft)	approx. 12 000 (26 460 lbs)	3 - 15	3.0	11
	approx. 5 400 (17,72 ft)	approx. 14 000 (30 865 lbs)		5.5	25
		approx. 14 000 (30 865 lbs)		7.5	40
		approx. 14 000 (30 865 lbs)		11.0	60
				11.0	60
				15.0	66

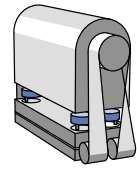
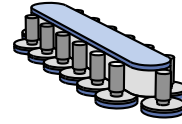
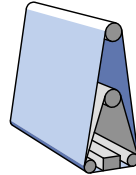
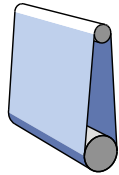
Subject to technical modifications.



# TECHNICAL DATA

## OSR II - UNITS

### Modules

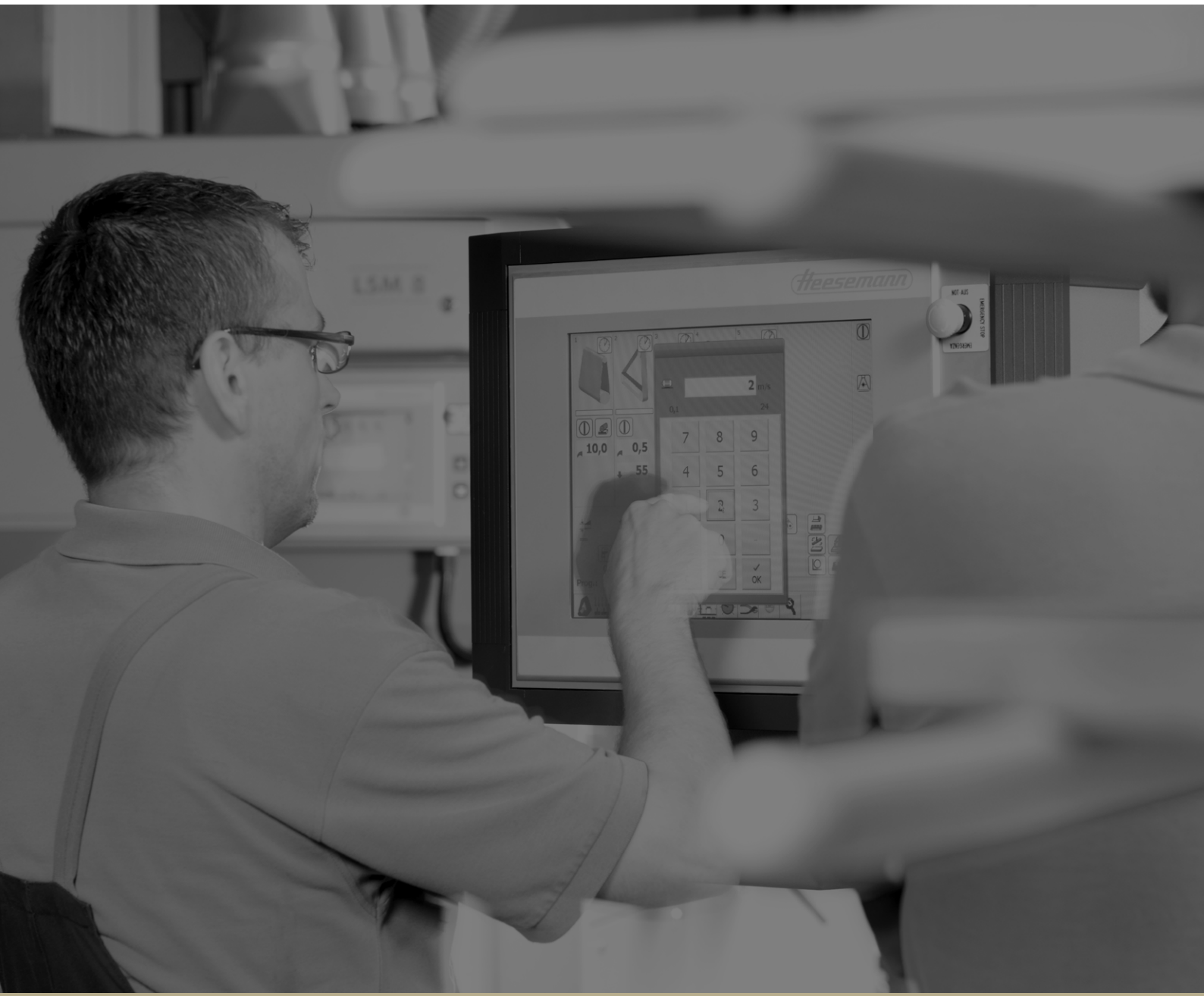


	Contact roller	Longitudinal unit with chevron belt	Disc brush unit RUT	Orbital sanding unit OSR
<b>Sanding belt dimensions</b> (LxB mm)	2 620 x 1 400 (8,6 x 4,6 ft)	2 620 x 1 400 (8,6 x 4,6 ft)	19 disc brushes Ø 180 mm (0,6 ft)	2 620 x 1 400 (8,6 x 4,6 ft)
<b>Drives</b> Performance / Belt speed (kW   m/s)	15 24 22 24 30 24 37 24 45 24	15 1.8 - 9 / 18 22 2.0 - 9 / 20	Brush rotation: 7.5 kW FU 160 - 800 rpm  Brush movement: 1.5 kW FU 5 - 25 m/min	20,5 -
<b>Connection diameter</b> (mm)	Ø 250 / Ø 280	Ø 160 (0,525 ft)	2 x Ø 160 (0,525 ft)	Ø 146 (0,48 ft)
<b>Air velocity</b> (m/s)	min. 20	min. 20	min. 20	min. 20

Extraction value for the transport belt cleaning 18.5 m<sup>3</sup>/min.







Karl Heesemann Maschinenfabrik GmbH & Co. KG  
P. O. Box 10 05 52, 32505 Bad Oeynhausen  
Reuterstraße 15, 32547 Bad Oeynhausen  
Germany  
Phone: +49 5731 188-0  
Fax: +49 5731 188-129  
[www.heesemann.com](http://www.heesemann.com)  
[sales@heesemann.de](mailto:sales@heesemann.de)



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Edge and profile sanding machines  
*UKP 20*



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