Heesemann

Reliability by proven design

MFA Impression

Perfection in surface sanding

75 years of sanding innovations

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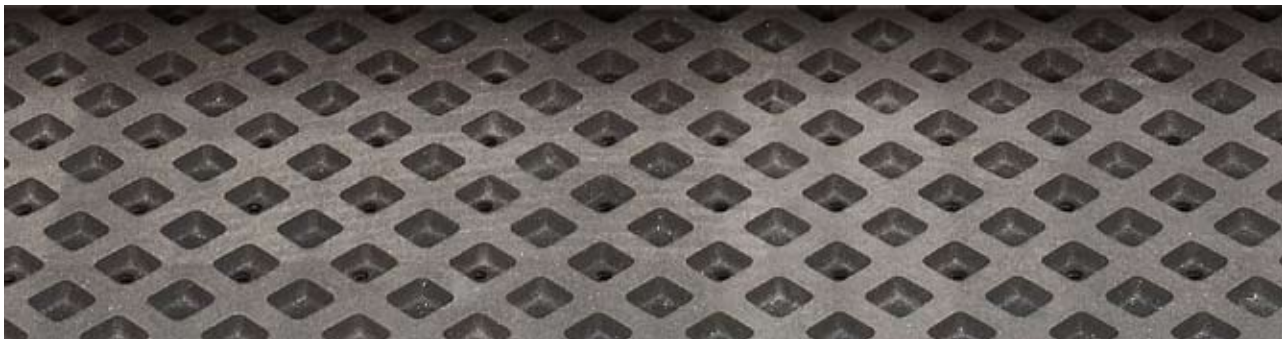
The solution for trade and industry.



Heesemann MFA Impression

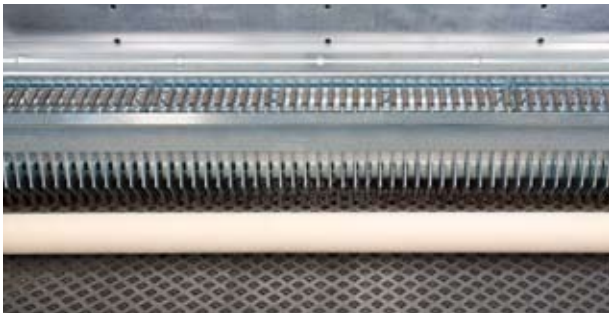
Proven and tested industrial machine technology for trade, interior fitting and industry in a compact design at an attractive price.

Modular sanding sets – a compact, rigidly structured machine design can take up to 4 longitudinal, cross and calibration units, as well as additional brush units. MFA Impression thus provides a machine solution for every conceivable application.

The result is a perfect sanding result. As with industrial machinery, you are free to choose the belt access and operator side.

Standard equipment

- Maintenance-free CSD® magnetic pressure beam system on all sanding units
- Fine sensing of workpiece contours for precise calculation of pressure
- Switch cabinets integrated into the frame construction
- Thickness tolerance compensation of 2 mm and more
- Transport table with constant working height
- NC controlled height adjustment system
- Infinitely adjustable feed speed, from 3 to 15 m/min
- Particularly high-performance suction power with low energy consumption for the safe transportation of small workpieces. The blower is integrated into the machine stand with soundproofing and is connected to the transport table without the use of hose connections.



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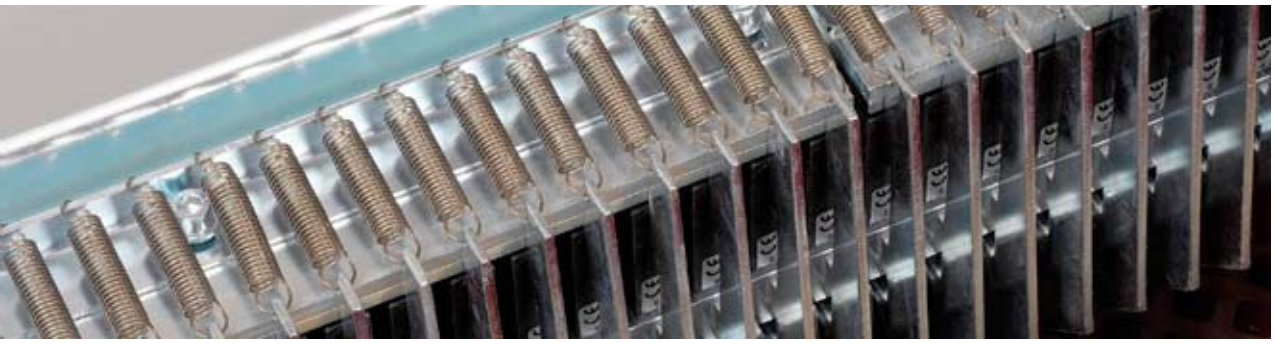

Workpiece detection

The finely graded workpiece detection by means of control rollers at intervals of 21 mm or, optionally, 16 mm provides the machine control system with information about the form and size as well as the transport belt position of the workpieces to be processed.

Contact-free thickness measurement in the infeed of the machine - optional

The thickness of the new workpiece to be processed is measured contact-free next to the infeed of the machine if necessary. The machine height is adjusted automatically after the last workpiece with the previous thickness has left the machine.

EnergyManagement-System EMS

The Impression comes with the EMS system off-the-shelf. Both, our environment and our users, benefit from this energy-saving system to the same degree. A diminished energy consumption unburdens the environment and reduces the cost.

The unit drive motors are designed to fulfil the requirements for the highest energy efficiency class. If no workpieces are being fed into the machine, they are run down to a low speed and a flap is closed on the suction blower in order to extremely reduce the air throughput. Depending on its actual load, this reduces the energy consumption of the machine quite considerably. When new workpieces are fed into the machine, all motors are rapidly started up again.

If the customer-supplied extraction system provides this option the machine can prevent the airflow through units that are not in operation by controlling closure flaps attached to the individual extraction hoods and thus make the extraction system save energy.

The goal: The perfect surface.

Workpiece suction

The suction power must guarantee faultless workpiece transportation at all times. The constructive redesign of the MFA Impression guarantees that high negative pressure and hence secure gripping of the workpieces is achieved, even in case of a low load.

The system is nevertheless optimised for energy-efficiency, as only minimal flow loss occurs.

The vacuum fan is integrated into the machine stand and directly connected to the transport table by means of flow-optimised channels, without the use of high-loss hose connections.

Wide sanding insert for longitudinal units

The special design features of the newly developed longitudinal units of the Impression make remarkable sanding results possible. The very large distance between the lower drive drums makes it possible to use a larger sanding insert and thus allows more flexible contact pressure with the workpiece. This corresponds to the standard of heavy industrial machinery, and allows a tolerance compensation of 2 mm and more.

Combination head

Optionally with eccentric bearing of the front return drum for PC-controlled slight calibration work. The return drums may either be ungrooved or grooved.

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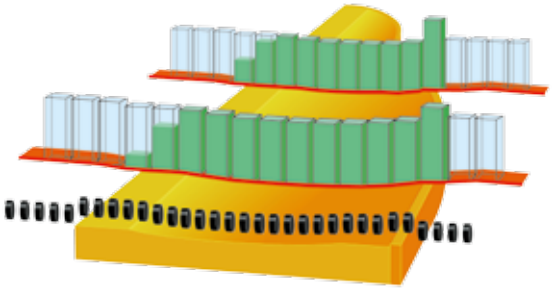
The CSD® magnetic pressure beam system

The solution for adaptable processing, proven and tested for more than two decades. The contact pressure force of each individual element of the pressure beam is continuously adjusted to the shape of the workpiece underneath.

The precise control of the sanding pressure is decisive for a high-grade, uniform surface sanding quality. The computer-controlled selective pressure regulation system of the CSD® magnetic pressure beam system can smoothly adjust the sanding pressure to every element in the pressure beam within milliseconds. It is particularly important with asymmetrical and round workpieces that the unique CSD® system allows fine adjustment of the contact pressure force in the edge area.

A highly sensitive sensing system at the infeed supplies the data for exact calculation of pressure. The elastic pressure beam compensates for workpiece thickness differences of 2 mm and more, whether the variation occurs within a single workpiece or from one workpiece to another. If the edges are designed differently, e.g. through the unilateral use of solid edge banding, the contact pressure can also be asymmetrically controlled in order to increase the sanding force on one side.

The contact pressure is generated by maintenance-free electrically controlled electromagnets. Contamination of the system, such as those that may occur with pneumatic elements, is impossible.



The perfect surface sanding machine MFA Impress

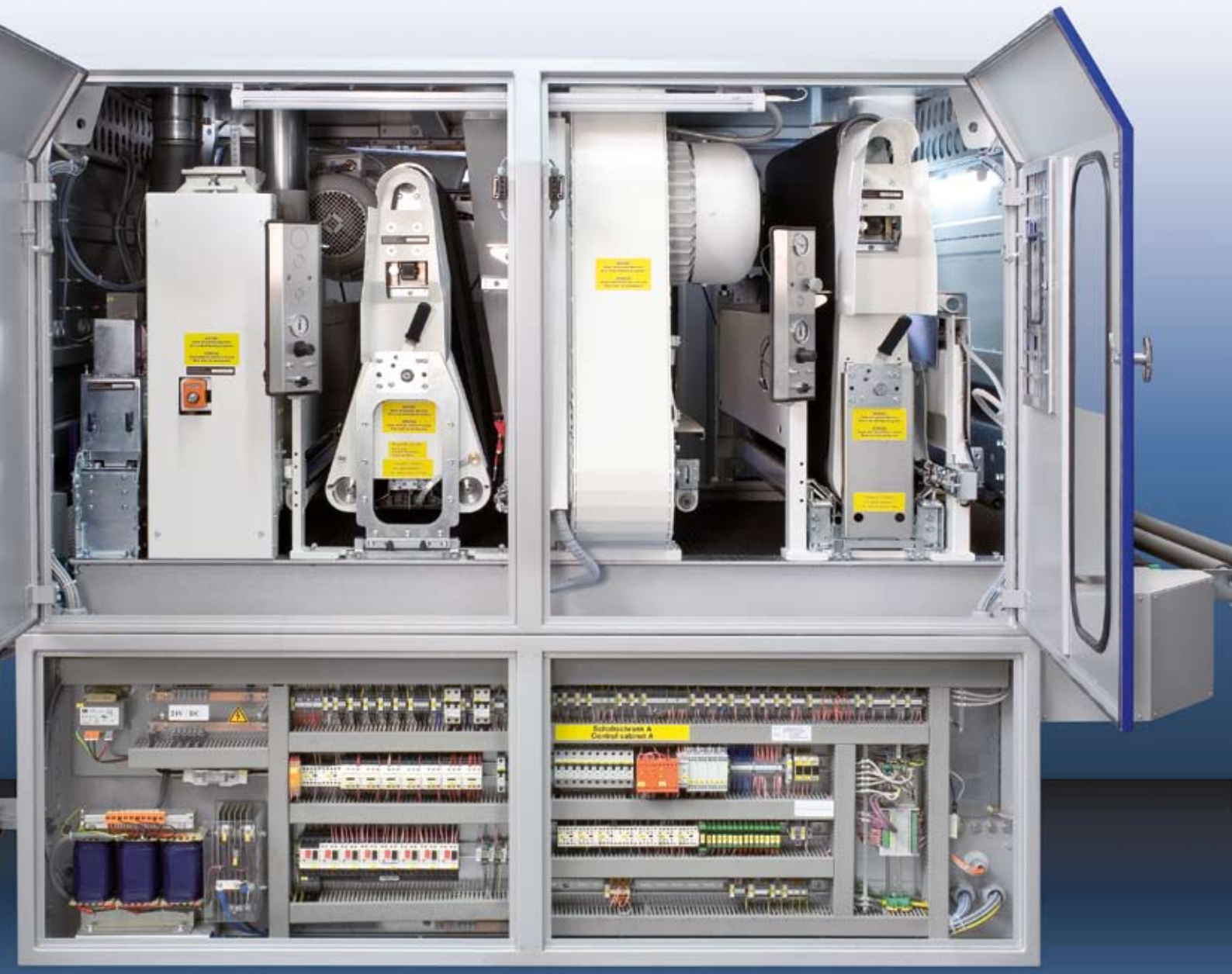
Key features:

- Modern mechanical engineering that unites precision, rigidity and long lifetime
- All rotating components are most finely balanced – there are no screwed connections that could subsequently impair the quality of balance. This means the machinery can run almost entirely without vibration.
- All bearings are supplied with lifetime lubrication - no maintenance work
- The sanding units are driven by means of poly-V belts - low-vibration and long life-time

Available variants:

ion

- Energy-saving sanding belt cleaning, dependent of the workpiece for all units - no compressed air is used when not sanding
- Cleaning brush with separate drive motor and extraction hood
- 10.4" industrial PC with touch screen user interface. Comprehensive onsite trouble-shooting. Integrated modem for remote analysis in the event of faults, and assistance from the factory service
- Roller table in the infeed of separate machines



Our surfaces are perfect.

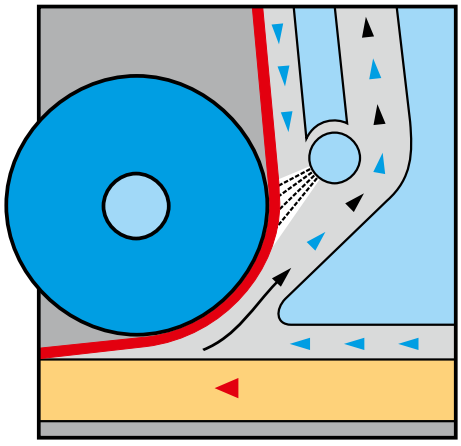
The cross sanding method

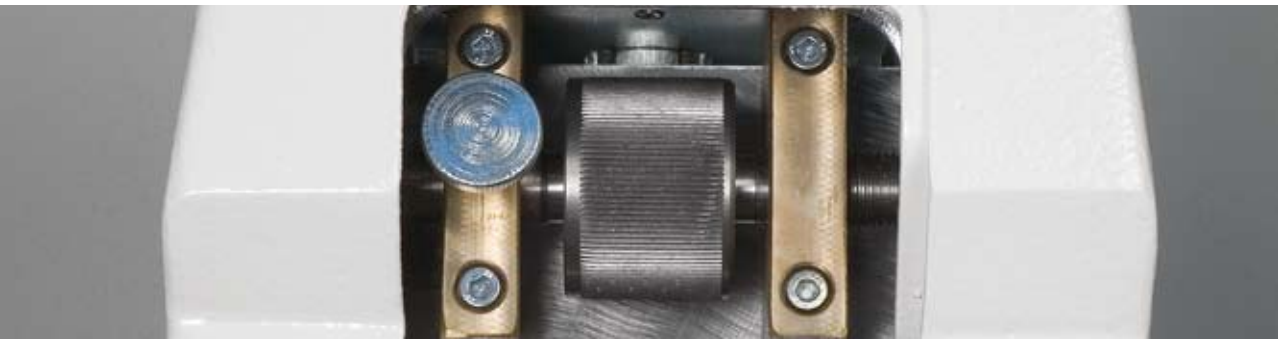
By general acknowledgement, the cross sanding method offers the best sanding result for wood surfaces. First, sanding crosswise to the wood grain is performed in order to then sand along the grain with one or multiple units.

It is advisable to level the protruding hard areas of the annual rings and to shear the loose wood fibres. This avoids any washout effect and any springing back of the fibres after lacquering.

Sanding belt cleaning

Every sanding belt has a cleaning system that is located close to the location where sanding dust is produced, and close to the extraction opening. There is a blow pipe that runs on precise guides and has many nozzle openings located very close to the drive roller. The movement takes place rapidly and with large overlaps, ensuring that the sanding belt is thoroughly cleaned and no lines are left. The system will be activated only if a workpiece is sanded underneath the unit.





Drive drum with poly-V belt

The units are driven by a vibration-free poly-V belt.

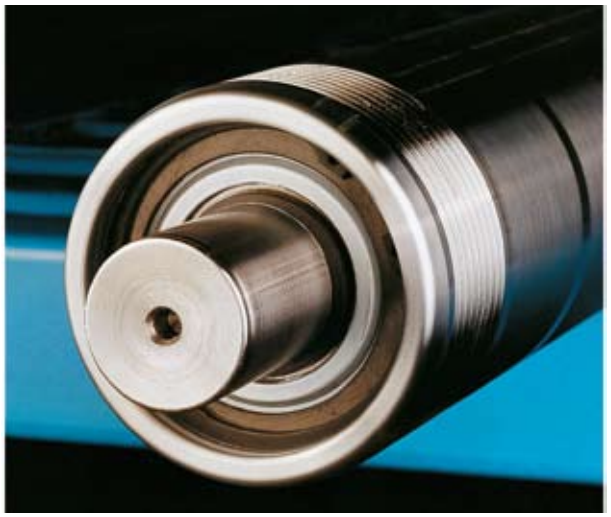
The profile of the drive belt is integrated into the most finely balanced drive roller. This way a permanently low vibration run is ensured.

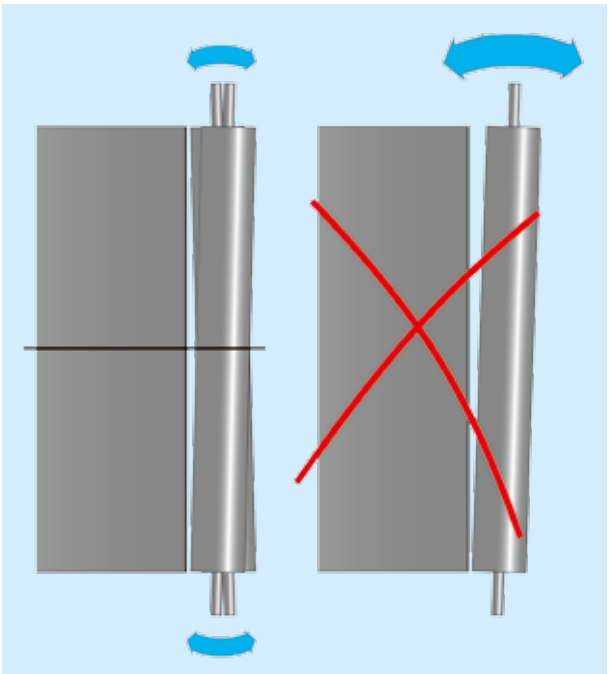
All bearings have been lubricated for life; this excludes maintenance errors in the selection of the lubricant and the lubrication intervals as well as assembly faults; any maintenance work is not required.

Transport belt control system

The bilaterally controlled return roller of the transport belt allows reduced clamp travel relative to conventional unilateral systems. This reduces strain on the transport belt and lengthens the service life.

In addition, the large cross forces that can arise when cross sanding units are used for intensive sanding can also be compensated for.





We do what we are good at. And we are good at what we do.

Longitudinal unit with pressure segment belt

The longitudinal unit with an internally running pressure segment belt is an addition to many applications that makes sense. The pressure segment belt interrupts the sanding traces of the grit and thus offers a harmonious and more even sanding pattern if e.g. sanding is not carried out in line with the wood grain. If a particularly fine grit is to be used for lacquer sanding, the pressure segment belt may significantly increase the lifetime of the abrasive material.

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

Belt edge compensation and optional setting of the belt run from outside

Even sanding belts with production-induced differences in the edge lengths are tensioned without any trouble.

The tensioning is performed using a tensioning system (patent pending), which is equipped with 2 bellows cylinders and a central guide. This system works with high elasticity and is maintenance-free and wear-free.

The sanding belt run can optionally be adjusted from outside while the machine is running.

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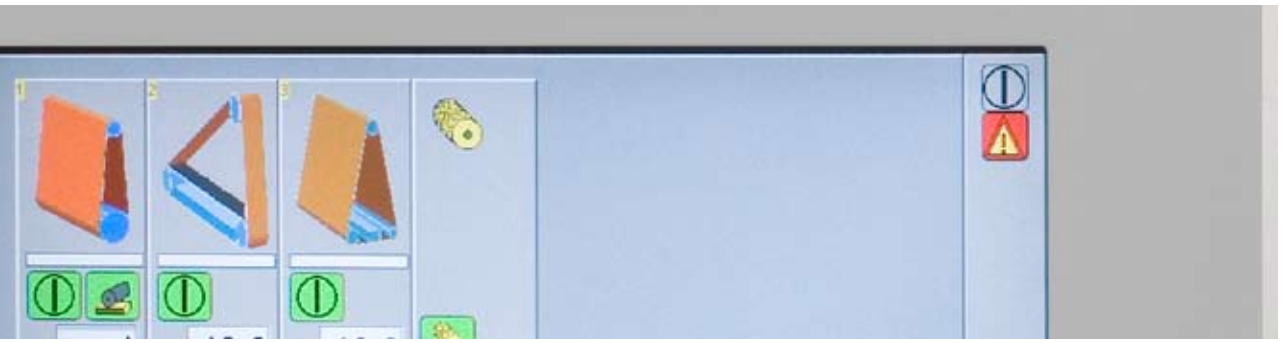

Industrial PC

The machine is operated via an 10.4“ industrial PC (optional 12“) with an intuitive user interface based on Windows. The preselected machine setting can be stored as a freely programmable sanding programme and called up again any time. A further user-friendly feature is the system's log file, in which all faults are protocolled. All inputs and outputs and their switching status are displayed on-screen to assist with service work.

This clearly designed fault diagnosis system and a standard modem for the use of the Heesemann Teleservice provide assistance in case of emergency.

Options

- Transport belt cleaning
- Belt length 2,620 mm instead of the standard belt length of 2,150 mm for the longitudinal unit
- Different motor powers for various production requirements
- Water-cooled servomotors for reliable running characteristics, even belt drive and extremely economical operation, even at lowest sanding belt speed settings
- Setting the belt run from outside
- For an optimal finish when sanding wood or lacquer, the longitudinal unit can be equipped with a pressure segment belt

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Modules

	Calibrating roller	Cross belt	Longitudinal belt	Longitudinal belt with pressure segment belt	Brush
Sanding belt dimensions (LxW mm)	2,150 x 1,400 2,620 x 1,400	4,800 x 150	2,150 x 1,400 2,620 x 1,400	2,620 x 1,400	dia. 120 x 1,430 dia. 150 x 1,430 dia. 250 x 1,430
Drives **Performance / belt speed** **(kW | m/s)**	15 18 22 18	15 2.0-20 16 0.1-20	15 1.8-18 16 0.1-18	15 1.6-16 16 0.1-16	1.5
Extraction value (m^3/min.) **Socket diameter** (mm)	30.5 Ø 180	30.5 Ø 160	30.5 Ø 160	30.5 Ø 160	18.0 Ø 140
Air velocity (m/s)	20	20	20	20	20

Extraction value for transport belt blasting 18.5 m^3/min.

Machine stand: Working height 880 mm / working width 1,350 mm						
W 2,300 **H** 2,100	**Length** (mm)	**Weight** (kg)	**Feed** (kW	m/min)	**Workpiece suction device** (kW	m^3/min)
1-Belt machine	1,750	3,000	0.75	3 - 15	3.0	11
2-Belt machine	2,300	4,000	1.5	3 - 15	3.0	25
3-Belt machine	2,850	5,000	2.2	3 - 15	5.5	25
4-Belt machine	3,700	7,000	3.0	3 - 15	7.5	40

Subject to technical modifications.

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
Internet: www.heesemann.com
Email: sales@heesemann.de

Production programme for wood, lacquer and foil sanding
Cross sanding machines
Longitudinal sanding machines
Lacquer sanding machines
Veneer sheet sanding machines
Universal edge and profile sanding machines
NC and CNC controlled
CNC profile and surface sanding machines
for 2- and 3-dimensional parts

March 2010 - GB Subject to technical modifications. With regard to machine equipment and its technical design the terms of the offer apply exclusively.