

*Heeseemann*



# LSM 8

THE SURFACE SANDING MACHINE



THE WHOLE PRODUCTION OF  
HEESEMANN SANDING MACHINES IS  
LOCATED AT THE HEADQUARTERS IN  
BAD OEYNHAUSEN, GERMANY.

# HEESEMANN

## SANDING WITH PASSION

Heesemann has produced sanding machines for industry and handicraft for more than 80 years.

Numerous essential and trend-setting innovations were made during this time, many of which are now industry standards. Heesemann has consistently provided new impulses to the sanding technology and developed it further.

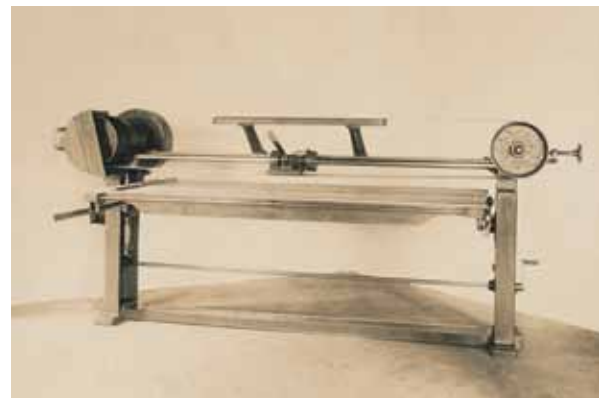
Our demand has always been to be the innovation leader in sanding technology and we do everything possible to comply with this demand.

Today Heesemann has about one hundred fifty employees in Bad Oeynhausen, Germany and is world market leader in the area of wood sanding machines. The production program includes machines for sophisticated handicraft as well as heavy duty industry machines.

A world-wide organized dealer network as well as distribution and service subsidiaries in the most important regions and markets provide appropriate contact persons on-site and guarantee short communication channels and highest-performance service.

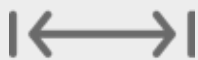
We support our customers with diversified service offers covering the entire life-time of our machines. We offer all services starting with an extensive consultation, professional training of your staff and technical service up to functional upgrades.

*One of the first Heesemann  
belt sanding machines.*





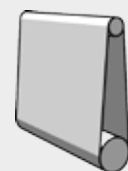
A SANDING LINE COMPOSED OF A LSM 8 SANDING FROM ABOVE AND A LSM 8 SANDING FROM BELOW REDUCES THE HANDLING COSTS SIGNIFICANTLY.



**1 300 mm / 1 400 mm**  
Sanding width



**5 - 25 m/min**  
Feed speed



**up to 6**  
Sanding units

# LSM 8

## THE SURFACE SANDING MACHINE



The LSM series fulfils highest demands in respect to power of performance and modern technique. Thanks to a variable modular design with up to max. 6 sanding units individual customer solutions may be arranged.

For this, calibrating, cross and longitudinal sanding units in different executions are available. Additionally, the possibility exists to adapt the sequence of the sanding units to the production requirements at a later stage. Due to respective execution and construction the LSM series is designed for unlimited requirements in view of operation time and performance demand.

The LSM 8 is available as a machine sanding from above and sanding from below.



*All Heesemann sanding machines are operated via an intuitive user interface based on Microsoft® Windows® on a touch screen device.*



## LSM 8

### AVAILABLE SANDING UNITS



*Contact roller unit*



*Cross sanding unit*



*Longitudinal sanding unit*



*Orbital sanding unit OSR*



*RUT disk brush unit*



*Brush unit*

# LSM 8

## EFFECT SANDING

Utilizing Heesemann surface sanding machines equipped with at least one cross sanding unit and one longitudinal sanding unit you can achieve stunning sanding effects. This is a brief description of what you can achieve and how it works:

### ROUGH SAW-CUT PATTERN

Utilizing a Heesemann cross sanding unit and a very rough abrasive grain you can create an outstanding rough saw-cut pattern onto the surface of veneered boards in through-feed operation.



### SCATTERED DEEPENINGS

Using a Heesemann longitudinal sanding unit in combination with highly flexible sanding belts, a special steel plate and a special sanding program you can create scattered deepenings onto the surface of your work pieces.



### VINTAGE LOOK

You can achieve a vintage look of your work pieces using a Heesemann longitudinal sanding unit on a surface with two different lacquers. Work pieces primed with a dark paint and then lacquered with a lighter varnish can be processed using a special sanding program to create a deliberately irregular sanding result.





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



# HEESEMANN

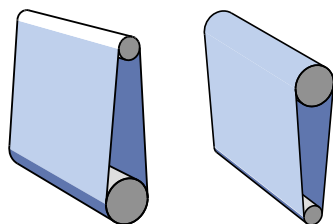
## CONTACT ROLLER UNIT

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

The contact roller unit with a 250 mm steel roller for example allows the exact calibration of materials like solid wood, particle boards, 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 press-on lips depending on the requirements.



*The contact roller unit of a LSM 8 sanding from below.*





THE CROSS SANDING UNIT IS AVAILABLE WITH SANDING BELT LENGTHS OF 5 400 MM AND 6 200 MM.

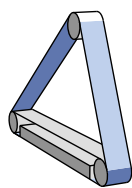
# HEESEMANN

## CROSS SANDING UNIT

For wooden surfaces the cross sanding method achieves the worldwide accepted best sanding result. The work pieces are sanded crosswise to the grain direction first and are afterwards sanded in direction of the grain with one or more sanding units.

This way the upper harder areas of the annual rings are leveled and loosened fibres are sheared off whereby a wash out effect is avoided and the fibres cannot straighten up again after lacquering.

The Heesemann cross sanding units are equipped with the Heesemann CSD® magnetic pressure beam system and a pressure segment belt.



*The sanding dust is removed from the sanding belt directly after the sanding process.*





ACHTUNG!  
Gefahr bei laufenden Maschine!  
Nicht in die Arbeitsbereich geraten!

ATTENZIONE!  
Pericolo quando la macchina è funzionante!  
Evitare di mettere le mani nell'area di lavoro!

Schneckenabmessung  
Drehmoment 300 Nm  
Drehzahl 1000 U/min



THE LONGITUDINAL UNIT OF THE  
LSM 8 IS BUILT EXTREMELY RIGID AND STANDS  
HIGHEST DEMANDS.



Filtergröße 14 mm  
Sohle di ferro 14 mm

Il tappeto antistatico - il tappeto di feltro rosso  
può almeno 1 volta al giorno (alla polvere  
di carteggiatura)

Getriebe - Flanette sind täglich  
montieren Sie um Schweißnähte zu reinigen



# HEESEMANN

## LONGITUDINAL SANDING UNIT

A longitudinal sanding unit with an optimized distance between the lower return 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.

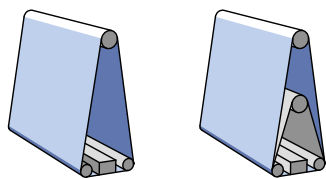
The longitudinal sanding units are available for sanding belts with belt lengths of 2 620 mm or 3 250 mm.

Optionally the longitudinal sanding unit can be equipped with an eccentric bearing of the front return drum for slight calibration work (**combi unit**). The return drum is activated via the terminal. The return drums may either be flat or grooved.

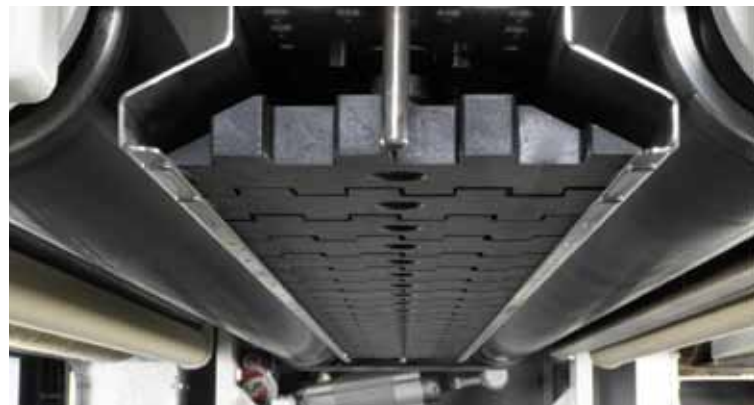
The **longitudinal unit with an internally running pressure segment belt** is a reasonable addition to many applications that makes sense. The pressure segment belt interrupts the sanding traces of the grit and thus offers a harmonious and more even sanding pattern.

If 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 by means of which the guide drums can be readjusted in accordance with the wear of the pressure segment belt. This compensates the wear on the pressure segment belt, and its lifetime is extended several times.



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





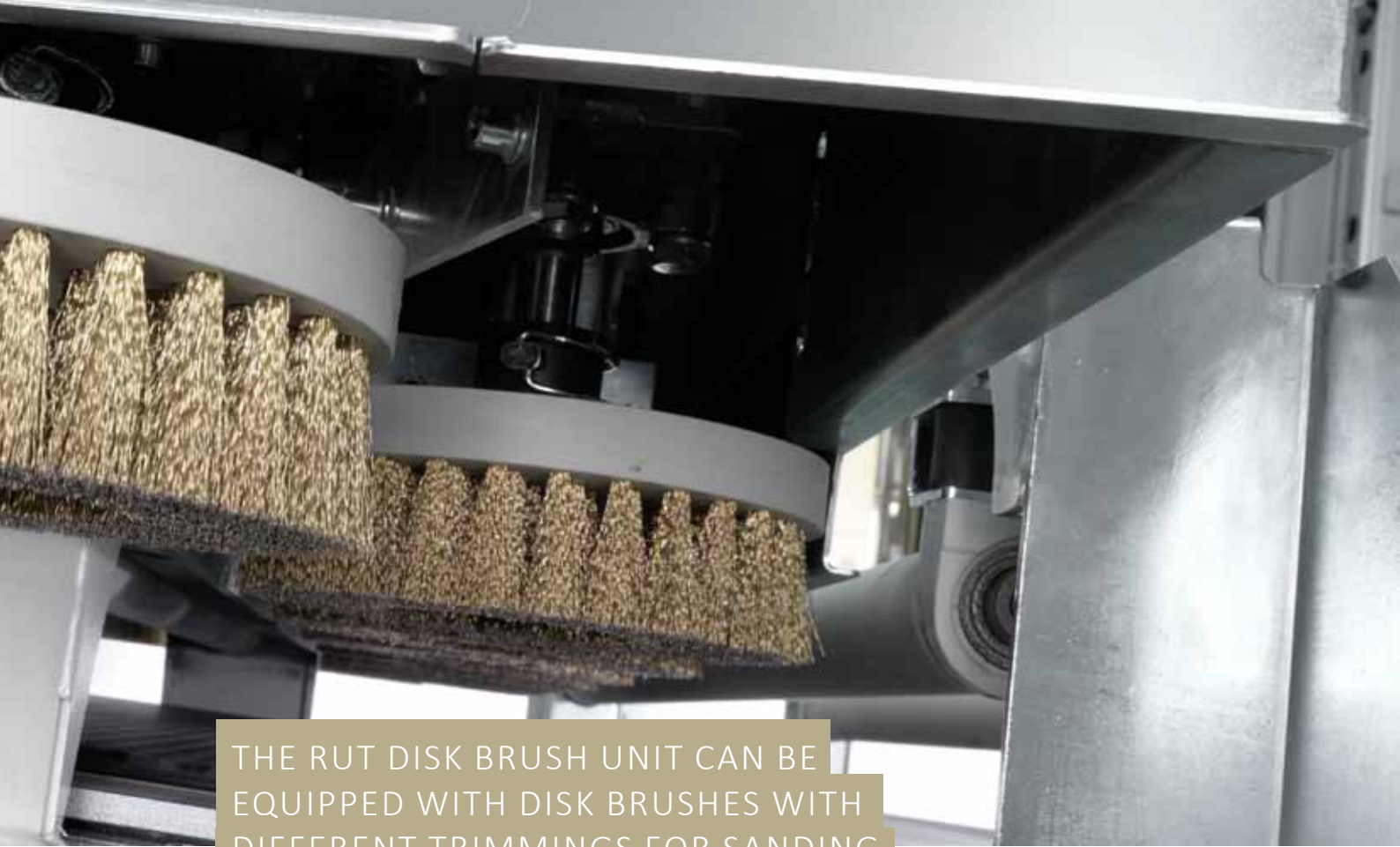
## HEESEMANN RUT DISK BRUSH UNIT

The RUT disk brush unit consists of 19 disk brushes. Their arrangement allows the sanding of contours in an up to now unreached quality. All areas are evenly sanded in different directions.

The frequency controlled drive system permits an infinitely variable regulation of the disk brushes rotation speed and their orbital velocity transversally to the feed direction.

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

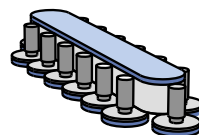
Due to the quick changing device replacing the disk brushes with trimmings for sanding for example by structuring brushes requires only minimal action.



THE RUT DISK BRUSH UNIT CAN BE EQUIPPED WITH DISK BRUSHES WITH DIFFERENT TRIMMINGS FOR SANDING OR STRUCTURING.



*Due to the quick changing device replacing the disk brushes requires only minimal action.*

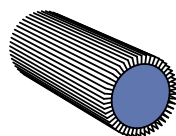


# HEESEMANN BRUSH UNITS

For Heeseemann sanding machines a wide variety of brush units with different trimmings for sanding and structuring are available. The brush units can be mounted inclined to the feed direction or can be equipped with an oscillation.

Heeseemann offers brushes with horse hair, fibre, sisal strings and mixed trimmings to clean the work pieces, fleece brushes for satin lacquered surfaces, brushes with Flex Trim abrasive trimmings to sand 3-dimensional work pieces and brushes with Anderlon or stranded wire trimmings as well as twisted knot brushes to structure the work pieces.

THE HEESEMANN BRUSH UNITS CAN  
OPTIONALLY BE EQUIPPED WITH AN OSCILLATION  
MECHANISM.

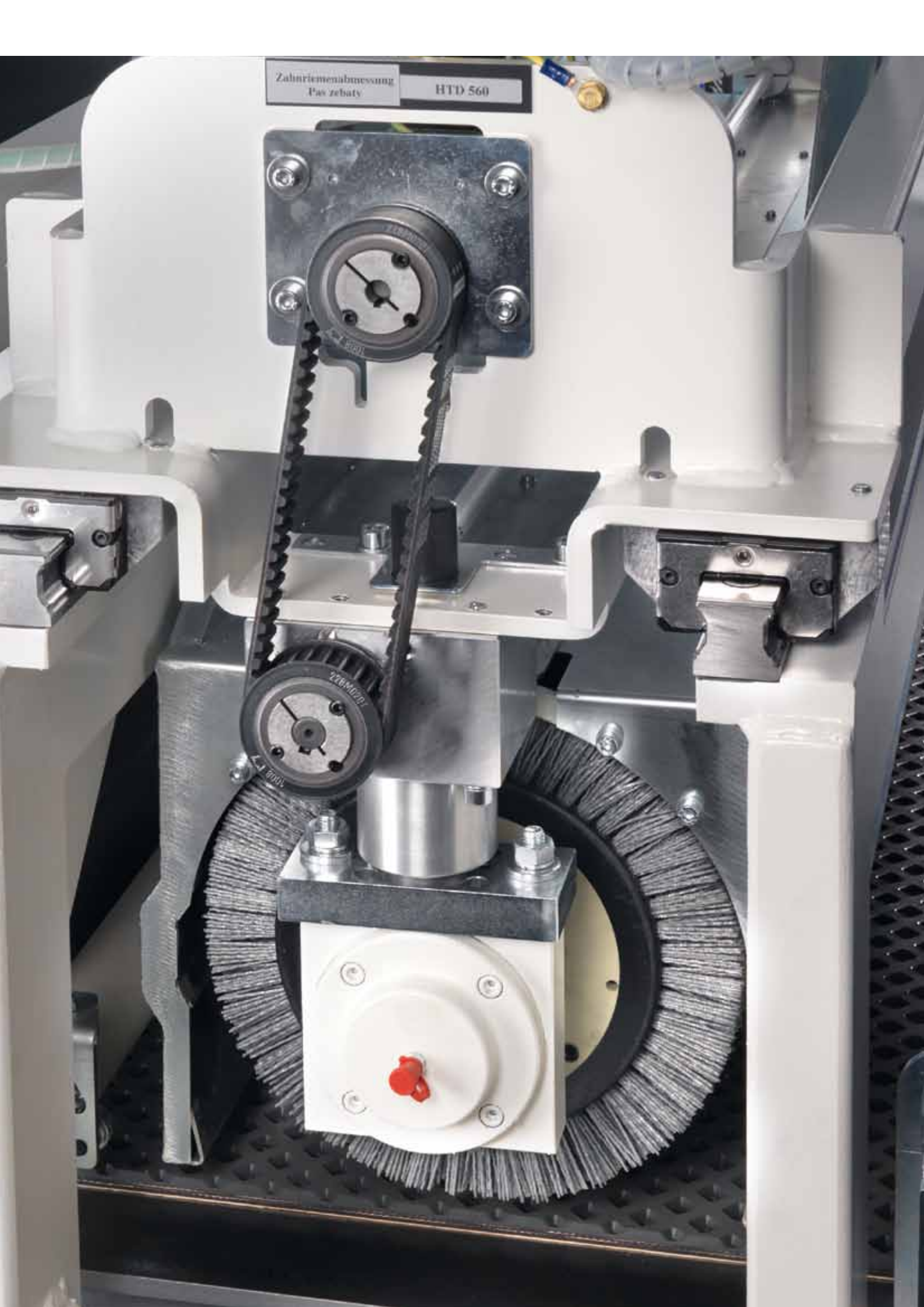


*The Heeseemann brush units can be equipped with different trimmings for sanding or structuring.*





Zahnriemenabmessung  
Pas zabaty HTD 560





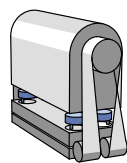
THE ORBITAL SANDING UNIT IS DESIGNED FOR FINE SANDING OF WORK PIECES WITH CROSS OR LONGITUDINAL GRAIN (KITCHEN DOORS OF SOLID WOOD) AND TO REDUCE SIGNIFICANTLY THE SANDING TRACES PRODUCED BY CROSS AND LONGITUDINAL BELTS.

# HEESEMANN OSR ORBITAL SANDING UNIT

On sanding frames and other work pieces with different grain directions sanding crosswise to the grain direction cannot be avoided. The generated sanding traces are strongly in evidence especially if dark stains are used. The Heesemann orbital sanding unit removes these traces.

The unit works based on a frequency controlled eccentric vibration with big stroke. An additional segment belt press-on system moves between the pressure beam and a vibrating sanding belt crosswise to the feed direction.

Hereby the sanding traces of the vibrating sanding belt are interrupted and a harmonious sanding result without any disturbing sanding traces is achieved.



*The static sanding belt of the orbital sanding unit OSR can be moved after a set length sanding meter at the push of a button.*





THE COMPUTER-CONTROLLED SELECTIVE PRESSURE REGULATION OF THE CSD® MAGNETIC BEAM SYSTEM CAN INFINITELY ADJUST THE SANDING PRESSURE TO EVERY INDIVIDUAL ELEMENT IN THE PRESSURE BEAM WITHIN MILLISECONDS.

# HEESEMANN

## CSD® MAGNETIC PRESSURE BEAM

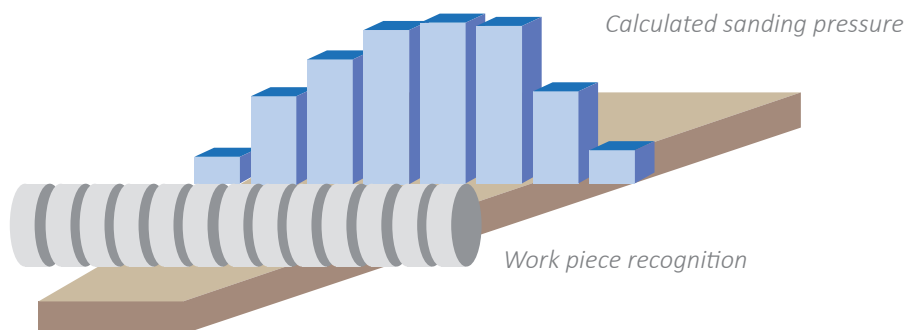
The precise control of the sanding pressure is decisive for a consistently high-grade sanding quality.

The computer-controlled selective pressure regulation of the CSD® magnetic beam system infinitely adjusts the sanding pressure within milliseconds to every individual element in the pressure beam. A highly sensitive sensing system at the infeed supplies the data for exact calculation of the required pressure.

The elastic pressure beam compensates for work piece thickness differences of 2 mm and more, whether the variation occurs within a single work piece or from one work piece to another.

A pollution of the pressure beam elements as it may occur on pneumatically working systems is impossible at the electromagnetically working CSD® pressure beam system.

The CSD® magnetic pressure beam is an integral part of all Heesemann cross and longitudinal sanding units.



*The elastic pressure beam compensates for work piece thickness differences of 2 mm and more.*



*From our EnergyManagement-System our environment and the machine-user benefit to the same degree. A diminished energy consumption unburdens the environment and reduces the cost.*

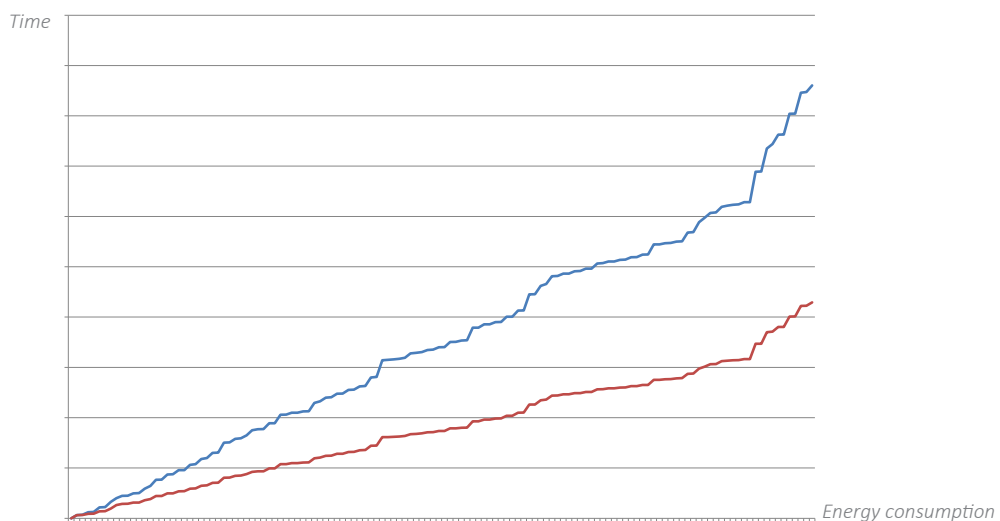
# HEESEMANN

## ENERGYMANAGEMENT-SYSTEM (EMS)

The LSM 8 can optionally be equipped with the EMS system. 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.

If no work pieces are being fed into the machine, the drive motors of the sanding units 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 work pieces 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 use of our EnergyManagement System leads to significant savings at the power consumption of the machine and the whole installation.*



*Heeseemann*

ALL HEESEMANN MACHINES ARE EQUIPPED WITH A POWERFUL AND HIGHLY FLEXIBLE INDUSTRIAL PC.



# HEESEMANN

## IPC WITH TOUCH SCREEN

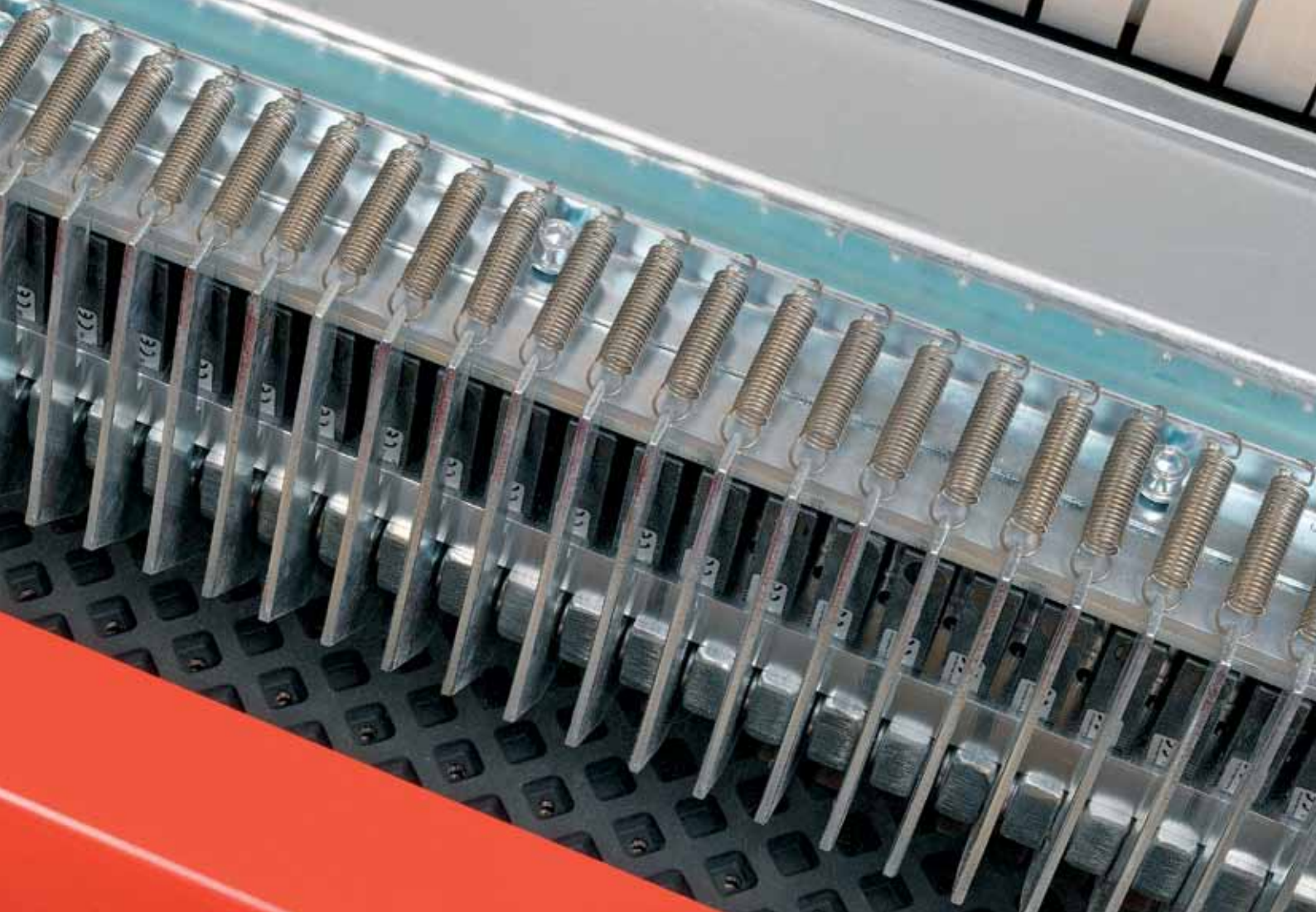
All Heesemann machines are equipped with a powerful and highly flexible industrial PC. All frequently repeated adjustment values are graphically displayed clearly on one screen page.

In addition, this industrial PC provides diversified applications for diagnosis and the ability to use peripheral equipment via standard interfaces. Furthermore, it can be connected to internal and external networks using Ethernet TCP/IP. The industrial PC acts like a web server and is diagnosable via standard browsers.

The industrial PC is available in a screen size of 10.4" or 15". The 15" model provides an additional operating data recording and is moveable to the operators' eye-level by a pivot mounted arm.



*The industrial PC is available in a screen size of 10.4" or 15".*



## **LSM 8**

### WORK PIECE DETECTION

The delicate work piece detection by means of control rollers at distances of 21 mm or optionally 16 mm provides the machine control system with information about the shape and size of the work pieces to be processed as well as its position on the transport belt.



## **LSM 8**

### **POLY-V DRIVE BELTS**

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 (quality class G1, cf. car tyre G40). 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.



## **LSM 8**

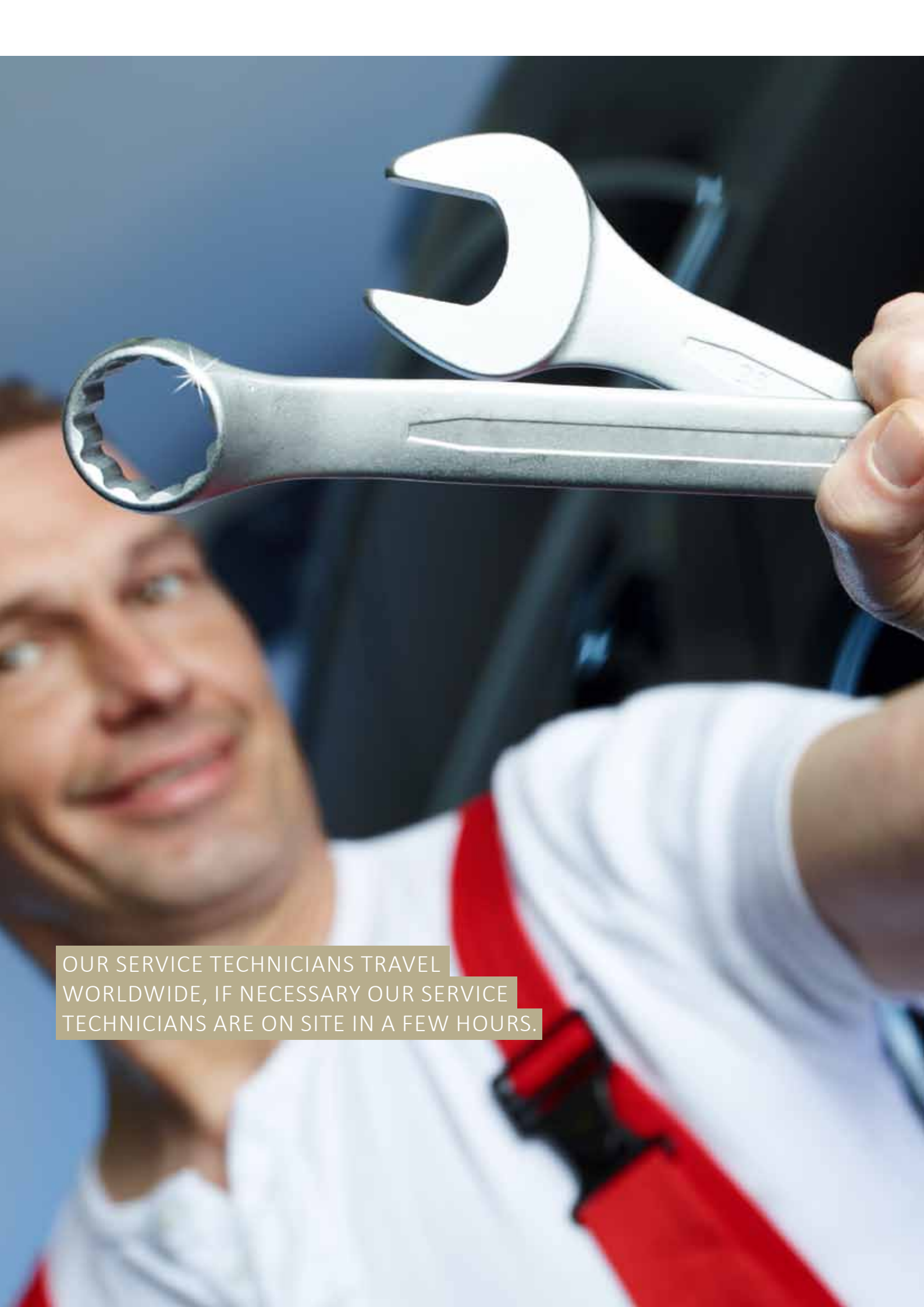
### SANDING BELT CLEANING

All sanding units are equipped with a cleaning device that loosens the sanding dust from the sanding belt and makes it ascertainable for the dust extraction. This cleaning takes place directly after the sanding process has been completed so that the sanding belt does not move the sanding dust through the machine.



## **LSM 8** SERVO DRIVES

Due to the use of new and extremely thin lacquer systems it can become necessary to reduce the sanding belt speeds to lower speeds than generally achievable with frequency inverters. Water-cooled servo drives allow a constantly safe belt run with full sanding power at minimal sanding belt speeds of 0.1 m/s. Machines equipped with these servo drives can be used for water lacquer systems for example. The water-cooled servo drives are comparable to efficiency class IE 4.



OUR SERVICE TECHNICIANS TRAVEL  
WORLDWIDE, IF NECESSARY OUR SERVICE  
TECHNICIANS ARE ON SITE IN A FEW HOURS.

# HEESEMANN

## SERVICE - ONSITE WORLD-WIDE

As a manufacturer of technically mature and individual machines with a long machine life our customers' satisfaction is our highest priority. To prove our customers' confidence in our competence is one of our most important tasks.

Our technical customer service supports you discovering an effective solution for possible problems. If an advice by phone is insufficient, an online diagnosis via tele service can take place. If the intervention of a technician is necessary, no problem- our service technicians travel worldwide, if necessary our service technicians are on site in a few hours.

Heesemann offers their customers all classical service activities like installation, maintenance and repair. We ensure a fast supply of wear and spare parts by our extensive spare parts warehouse. In cooperation with our logistic partners we deliver worldwide, fast and reliable. Heesemann delivers original spare parts exclusively which meet our high demands in their fitting accuracy, material properties, durability and functionality.

Our inspection service provides a detailed evaluation of your machines' technical condition. On demand we prepare offers for further provisions, installation possibilities of latest sanding technology and control upgrades.

Such as our machines our customer service and spare parts are warrantors for quality and reliability "made in Germany".



### Service hotline:



+800 188 188 19\*



+49 5731 188-300

*Our service team is available 24/7.*

*\* Free call.*

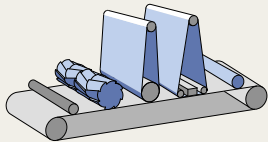




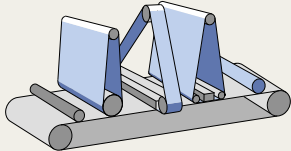


# MACHINE CONFIGURATIONS FREQUENTLY CHOSEN

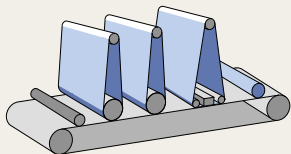
## Solid wood sanding



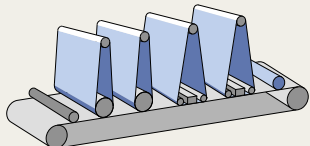
**LSM 8 Cu/R/L** Planing, calibrating and fine sanding machine in one pass



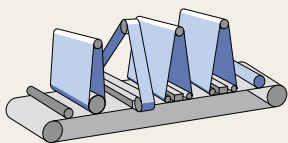
**LSM 8 R/C/L** Calibrating and fine sanding machine for high surface qualities



**LSM 8 R/R/L** Calibrating and fine sanding machine for high stock removal

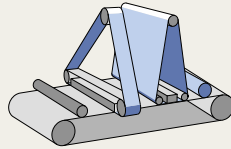


**LSM 8 R/R/L/L** Calibrating and fine sanding machine for high stock removal and higher feed speeds

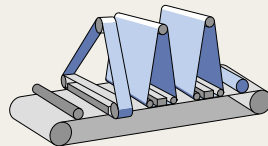


**LSM 8 R/C/L/L** Calibrating and fine sanding machine for high surface qualities with fine final grits

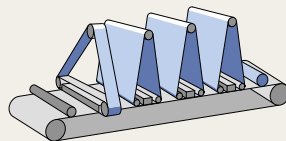
## Veneer sanding



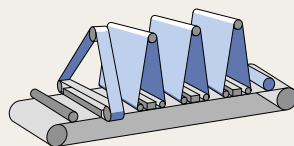
**LSM 8 C/L** Cross sanding machine for low feed speeds



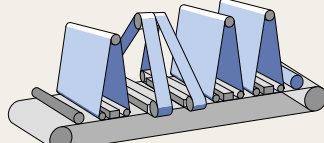
**LSM 8 C/L/L** Cross sanding machine for medium feed speeds



**LSM 8 C/L/L/L** Cross sanding machine for higher feed speeds

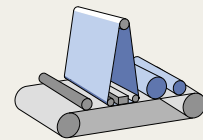


**LSM 8 C/L/L/L** Cross sanding machine for high feed speeds

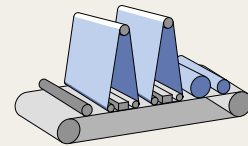


**LSM 8 L/C/C/L/L** Cross sanding machine for high feed speeds with a considerable proportion of cross veneered parts

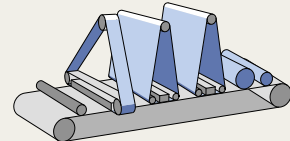
## Lacquer sanding



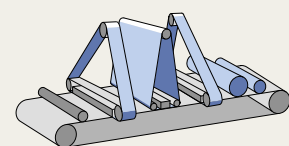
**LSM 8 L** Sanding machine for small application quantities



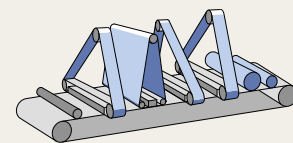
**LSM 8 L/L** Sanding machine for medium application quantities



**LSM 8 C/L/L** Sanding machine for higher application quantities

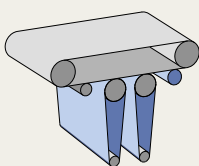


**LSM 8 C/L/C** Sanding machine for a higher gloss with finer grits

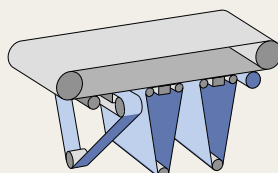


**LSM 8 C/L/C/C** Sanding machine for high gloss lacquers

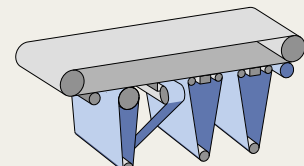
## Sanding machines working from underneath



**LSM 8-U R/R**  
Calibrating machine



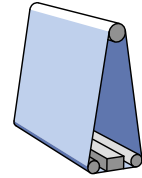
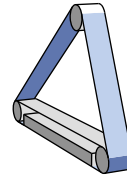
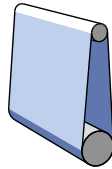
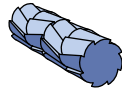
**LSM 8-U C/L/L**  
Cross sanding machine for medium feed speeds



**LSM 8-U R/C/L/L**  
Calibrating and fine sanding machine for high surface qualities and fine final grits

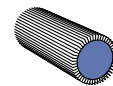
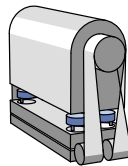
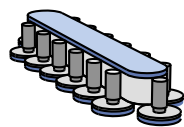
# TECHNICAL DATA

## LSM 8 - UNITS



### Modules

	Cutter head	Contact roller	Cross unit	Longitudinal unit
<b>Sanding belt dimensions</b> (LxW mm)	Ø 180 x 1 350 mm	2 620 x 1 350 3 250 x 1 350	5 400 x 150 6 200 x 150	2 620 x 1 350 3 250 x 1 350
<b>Ø Contact roller</b>		Steel Ø 250 mm Rubber Ø 300 mm Optional Ø 400 mm		
<b>Drives</b> Performance/Belt speed (kW   m/s)	22      30	22 - 75    24 / 30	13 / 17      12 / 24 16,5 / 21    12 / 24 11            0,5 - 12 22            0,5 - 24	13 / 17      10 / 20 16,5 / 21    10 / 20 11            0,5 - 12 22            0,5 - 20 30            0,5 - 20
<b>Connection diameter</b> (mm)	Ø 250	Ø 250	Ø 160	Ø 160
<b>Extraction value</b> (m³/min)	35,0	89,5	30,5	30,5
<b>Air velocity</b> (m/s)	20	20	20	20



### Modules

	Disk brush unit RUT	Orbital sanding unit OSR	Brushes
<b>Sanding belt dimensions</b> (LxW mm)	19 disk brushes Ø 180 mm Sanding width: 1 350 mm	2 620 x 1 350	Ø 120 x 1 430 Ø 150 x 1 430 Ø 250 x 1 430
<b>Drives</b> Performance/Belt speed (kW   m/s)	Brush rotation: 7,5 kW FU 160 - 800 rpm  Brush movement: 1,5 kW FU 5 - 25 m/min	5,5	1,5 2,2 4,0      4,0 5,5 7,5
<b>Connection diameter</b> (mm)	Ø 250	Ø 140	Ø 140
<b>Extraction value</b> (m³/min)		20	18,5
<b>Air velocity</b> (m/s)	20	20	20

# TECHNICAL DATA

## LSM 8

Machinery base: Working height 880 mm / Working width 1 350 mm

W 2 300 H 2 250	Length (mm)	Weight (kg)	Feed speed (m/min)		Suction device (kW    m <sup>3</sup> /min)	
<b>1 unit</b>	approx. 1 955	approx. 4 200	1,5 / 3,0	5- 25	5,5	25
<b>2 units</b>	approx. 2 955	approx. 6 000	2,2 / 4,0	5- 25	5,5	25
<b>3 units</b>	approx. 3 855	approx. 7 500	3,0 / 5,5	5- 25	7,5	40
<b>4 units</b>	approx. 4 455	approx. 10 000	4,0 / 7,5	5- 25	11,0	60
<b>5 units</b>	approx. 5 165	approx. 12 000	5,5 / 11,0	5- 25	15,0	66
<b>6 units</b>	approx. 5 865	approx. 15 000	7,5 / 15,0	5- 25	15,0	66

Subject to technical modifications.

# PRODUCT MATRIX

## SURFACE SANDING MACHINES



	Sanding width	Feed speed	Sanding units
HSM	1 300 mm	3 - 15 m/min	2 or 3
MFA Impression	1 350 mm	3 - 15 m/min	up to 4
MFA10	1 350 mm	5 - 25 m/min	up to 6
BM 8	1 350 mm	5 - 25 m/min	up to 6
LSM 8	1 300 mm / 1 400 mm	5 - 25 m/min	up to 6
KSA 8	1 600 mm - 2 600 mm	5 - 25 m/min	up to 6
FBA 8	650 mm / 1 350 mm	6 - 30 m/min	up to 4



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Surface sanding machines for wood  
*HSM, MFA Impression, MFA 10, LSM 8, KSA 8, BM 8, FBA 8*



Deburring and edge rounding machines for metal  
*profiRounder*



Edge and profile sanding machines  
*UKP 20*



Sanding machines for 3D processing  
*BM 8, UKP 20*