



# UKP 20

UNIVERSAL EDGE AND PROFILE 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 the wood 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 and revolutionized sanding technology.

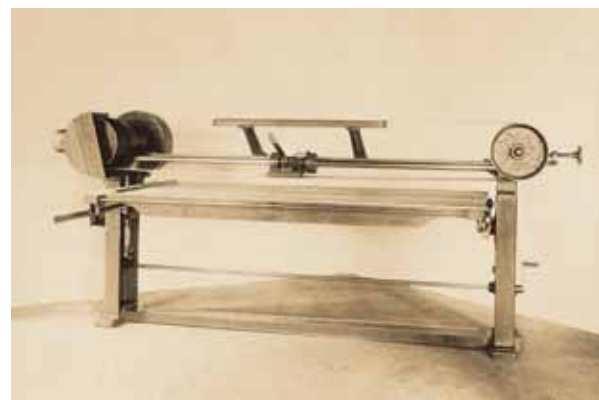
Our demand has always been to be the innovation leader in sanding technology and we do everything possible to comply with this demand.

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.*





THE UKP 20  
IS THE UNIVERSAL SOLUTION FOR ALL EDGE AND  
PROFILE SANDING TASKS



**300 mm**  
Sanding width



**5 - 60 m/min**  
Feed speed



**∞**  
Sanding units

# UKP 20

## EDGE AND PROFILE SANDING



The Heesemann edge and profile sanding machines use belt sanding units and brush units for constant sanding of the work pieces. By means of a flexible suspension of the sanding shoes the sanding units adapt optimally to the profile tolerances. UKP machines can be equipped with milling units, lacquer application devices as well as UV drying units.



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



## UKP 20

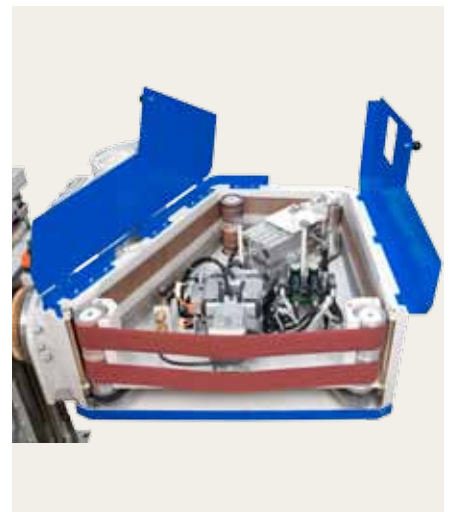
### AVAILABLE SANDING UNITS



*Unit K 4*



*Unit M 4 / M 4-L*



*Double belt unit*



Unit EGS



Unit L 300



Unit L 300-U



THE EDGE AND PROFILE SANDING MACHINE UKP 20 TRANSPORTS WORK PIECES BY MEANS OF A HIGH-PRECISION CHAIN AND RUBBER-COATED PRESSURE ROLLERS.



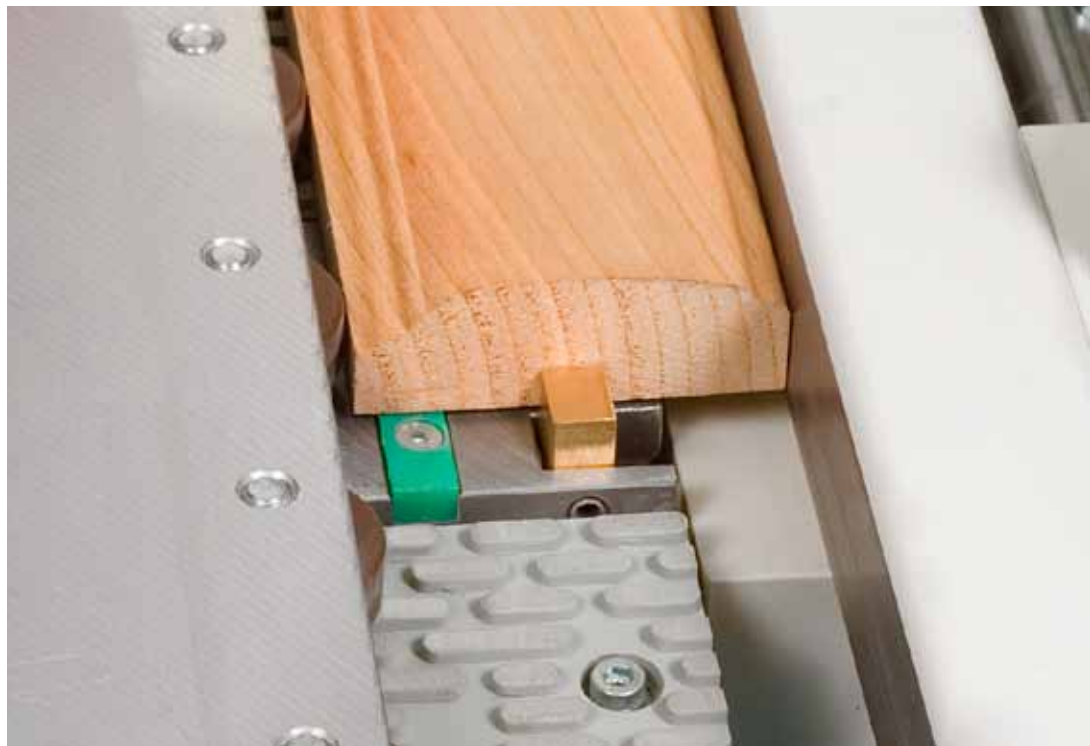
## UKP 20

### WORK PIECE TRANSPORT

The edge and profile sanding machine UKP 20 transports work pieces by means of a high-precision chain and rubber-coated pressure rollers. The width of the transport chain can be determined with regard to the work pieces to be sanded.

For double-sided processing of panels and doors a double-sided transport device is available as well as a divided transport device for double-sided processing of rails.

The transportability of short work pieces is secured by slewable dogs.



*The transportability of short work pieces is secured by slewable dogs.*



THE IMPULSES OF THE DETECTION ARE TRANSMITTED MILLIMETRE BY MILLIMETRE TO ALL SUBSEQUENT UNITS.

## UKP 20

### LINE CONTROL

At the infeed of the machine, the work pieces are detected and the impulses are transmitted millimetre by millimetre to all subsequent units.

The different settings of the units with regard to sanding pressure, angle position, belt tension and feed speed are electronically compensated. Even the different adjustment behaviour of steel and felt tools are taken into account.

This ensures that even after a complete reset of the entire machine the control system adjusts the precise associated values automatically, relieving the operator from additional setup work.



*The work pieces are detected at the infeed of the machine.*



THE UNIVERSAL SUPPORT CAN BEAR THE UNITS M 4, M 4-L OR EGS AS WELL AS HEAVY MILLING UNITS.

## UKP 20

# UNIVERSAL SUPPORT

In order to meet the requirements of computer-controlled axis adjustment, the design of the universal support was based on criteria from machine tool construction, i.e. stable, vibration-free structure with maintenance-free guide elements. Double round guides made of hardened steel ensure continuous operation without any wearing.

The swivelling drive unit, which also does not require any maintenance and comes complete with universal roller bearings from robot technology and free from play, takes up the units and provides a free swivelling range from 45 degrees below up to 90 degrees above the horizontal.

The universal support is available for only a manual adjustment, for manual adjustment with electronical position indicators and with fully automatic CNC adjustment of all axis.



*Electronical position indicators connected with the machine control unit allow a comparison of the target value and the actual value of an axis.*

THE K 4 UNIT IS USED TO SAND RADI  
AND BEVELS



# HEESEMANN

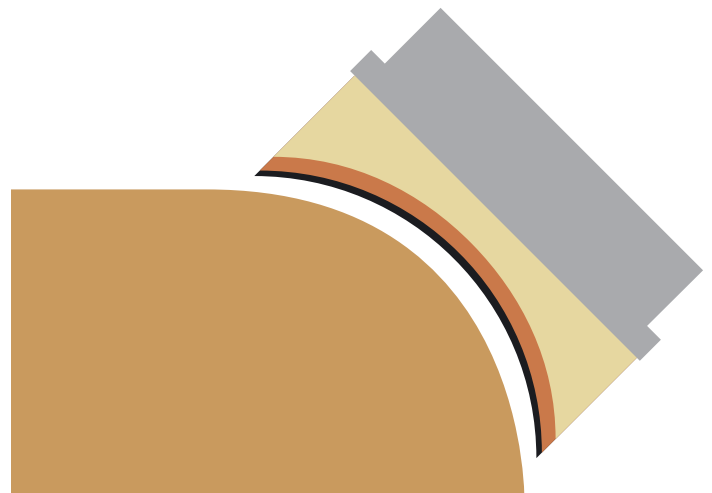
## UNIT K 4

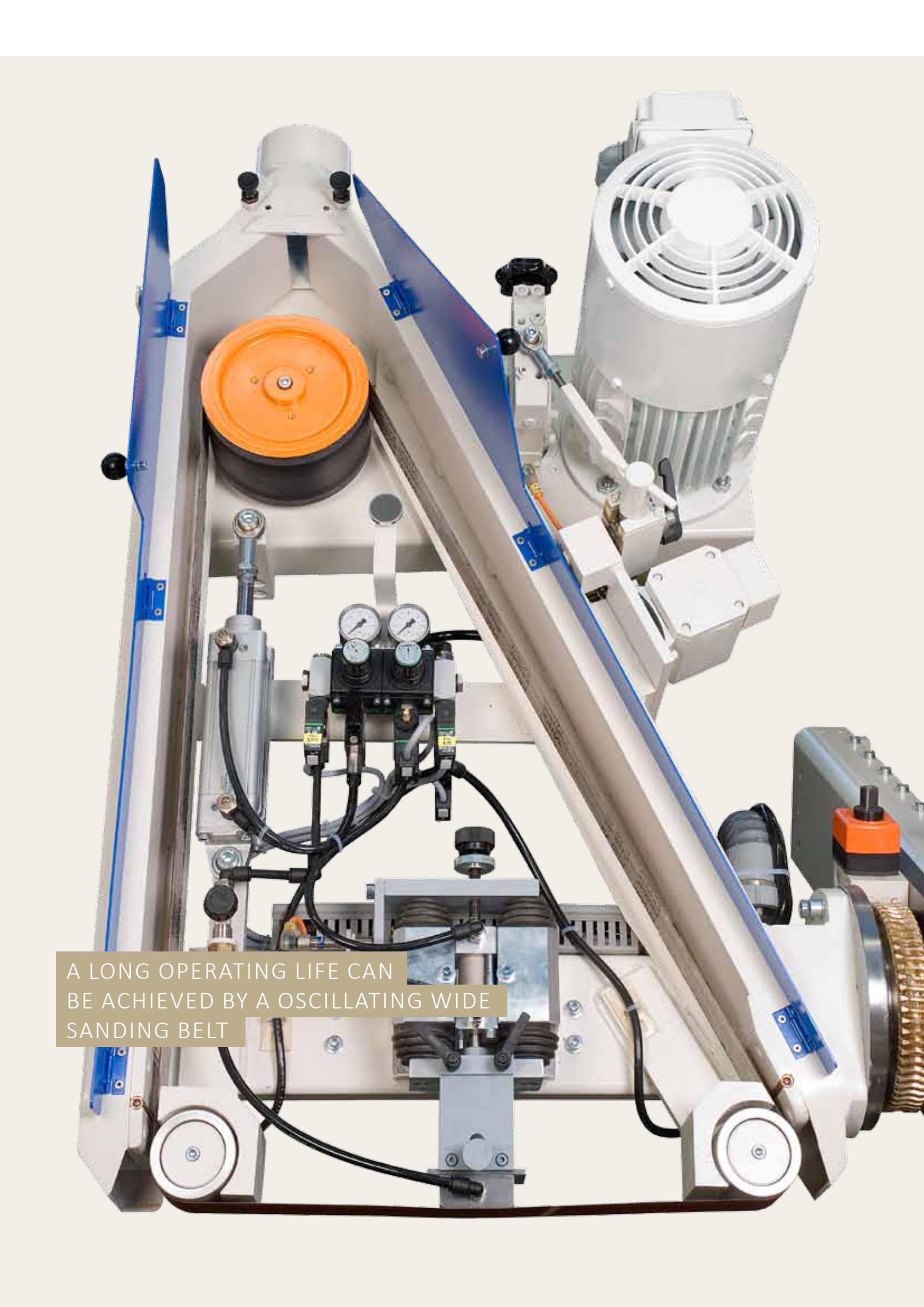
The unit K 4 has a sanding belt length of 2 000 mm. Belt return rollers at a fixed position guarantee a proper run of the sanding belt running in and against feed direction.

The units offer sanding belt speeds of 4 m/s and 8 m/s as well as continuous sanding belt speeds from 0,5 up to 8 m/s. By means of a balanced mounting of the drive with belt transmission belt tension values set remain constant despite the angular adjustment of the unit. An oscillation of the sanding belt provides a more efficient usage of the sanding belt running in and against feed direction.

A compressed air connection for profile tools with air cushion, a safety shutdown in case of belt rupture and a belt cleaning device are standard features of the K4 unit.

*Application example:  
Sanding radii.*





A LONG OPERATING LIFE CAN  
BE ACHIEVED BY A OSCILLATING WIDE  
SANDING BELT



# HEESEMANN

## UNIT M 4 / M 4-L

The belt sanding unit M 4 is available in two versions with different sanding belt lengths and with different sanding belt widths. The standard version has a sanding belt length of 2 300 mm, the version M 4-L a sanding belt length of 2 800 mm. Belt return rollers at a fixed position guarantee a proper run of the sanding belt running in and against feed direction.

The units offer sanding belt speeds of 6 m/s and 12 m/s as well as continuous sanding belt speeds from 0,7 up to 12 m/s. By means of a balanced mounting of the drive with belt transmission belt tension values set remain constant despite the angular adjustment of the unit. An oscillation of the sanding belt provides a more efficient usage of the sanding belt running in and against feed direction. A compressed air connection for profile tools with air cushion, a safety shutdown in case of belt rupture and a belt cleaning device are standard features of the M4 unit.

For a harmonious and more even sanding result and a longer operating life the unit M 4-L can be equipped with a pressure segment belt additionally.

The unit M 4 can also be used for cross sanding. Using the principle of cross sanding highest demands on the surface quality can be fulfilled. Additionally cross veneered sections can be sanded in grain direction utilizing the cross sanding unit.

*Application example:  
Sanding of the work piece  
edge with the unit M 4*





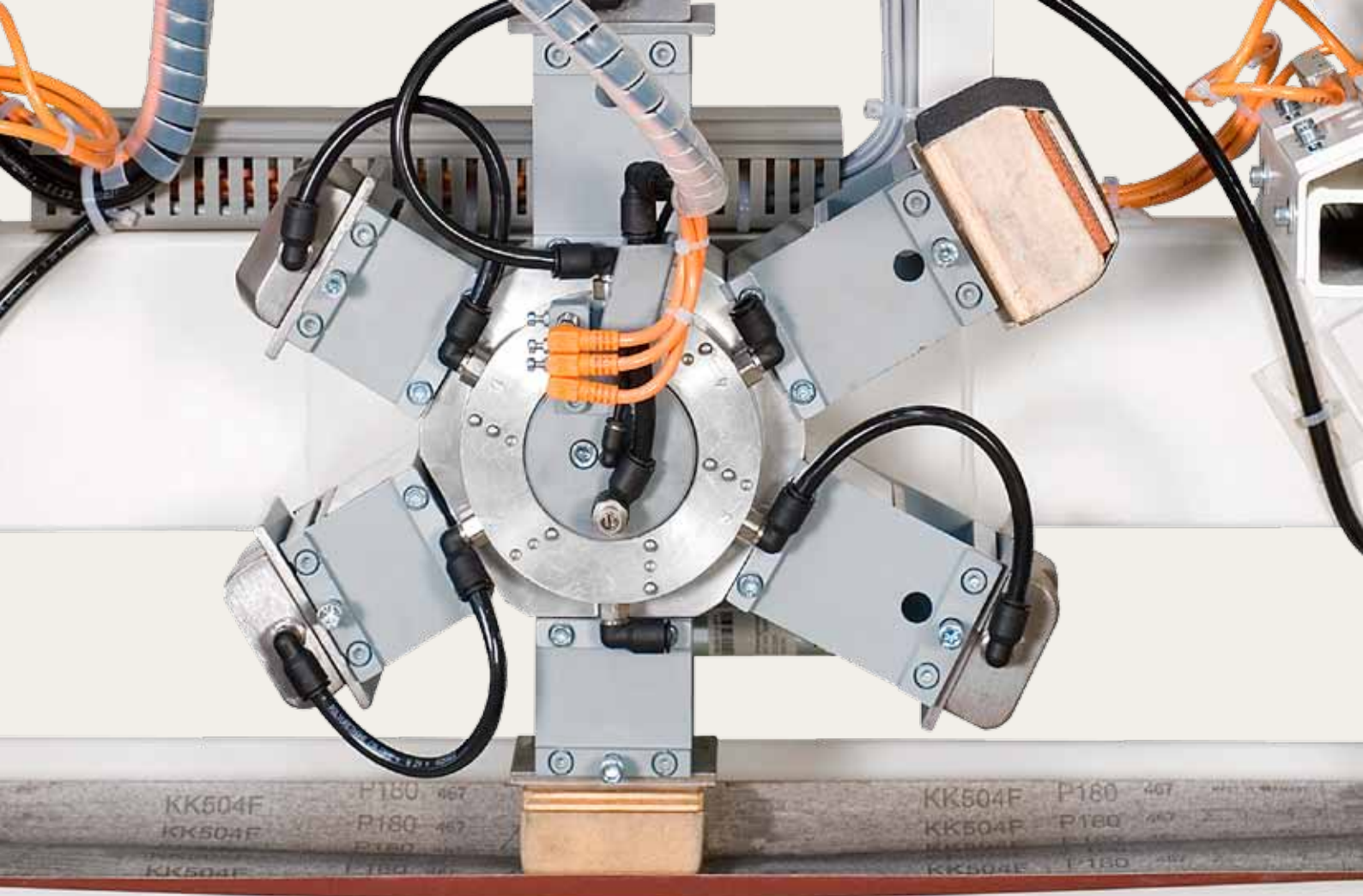
## UKP 20 DOUBLE BELT UNIT

The UKP double belt unit can be equipped with 2 different sanding belts. This gives the option that one sanding belt can be used for wood sanding and the other one for lacquer sanding. Without any additional setting times, the respective sanding belt is moved into position for operation at the push of a button on the operating terminal.



## UKP 20 TOOL HOLDER

The easy-running Heesemann contact system compensates tolerances of several millimetres - and that along with an even sanding intensity. This provides for a constant adjustment to edges and profiles in throughput without any risk of sanding through. Depending on the sanding intensity required, the sanding pressure can be sensitively adjusted pneumatically, by request even electronically. For sanding multistage profiles with one unit, a double sanding tool can be used.



## UKP 20 REVOLVING TOOL

For use on changing contours, M 4-L units can be equipped with an automatic 6x revolving tool. The steel sanding shoes with air cushion are automatically supplied with air during operation.



## **UKP 20** BRUSH UNITS

For cleaning and for an additional smoothing, profiled or cylindrical sanding brushes can be used in different widths depending on the shape of the work piece. The brush units are installed in a swivelling manner.

For special sanding effects, such as structuring, the units can be supplied in a controlled version.



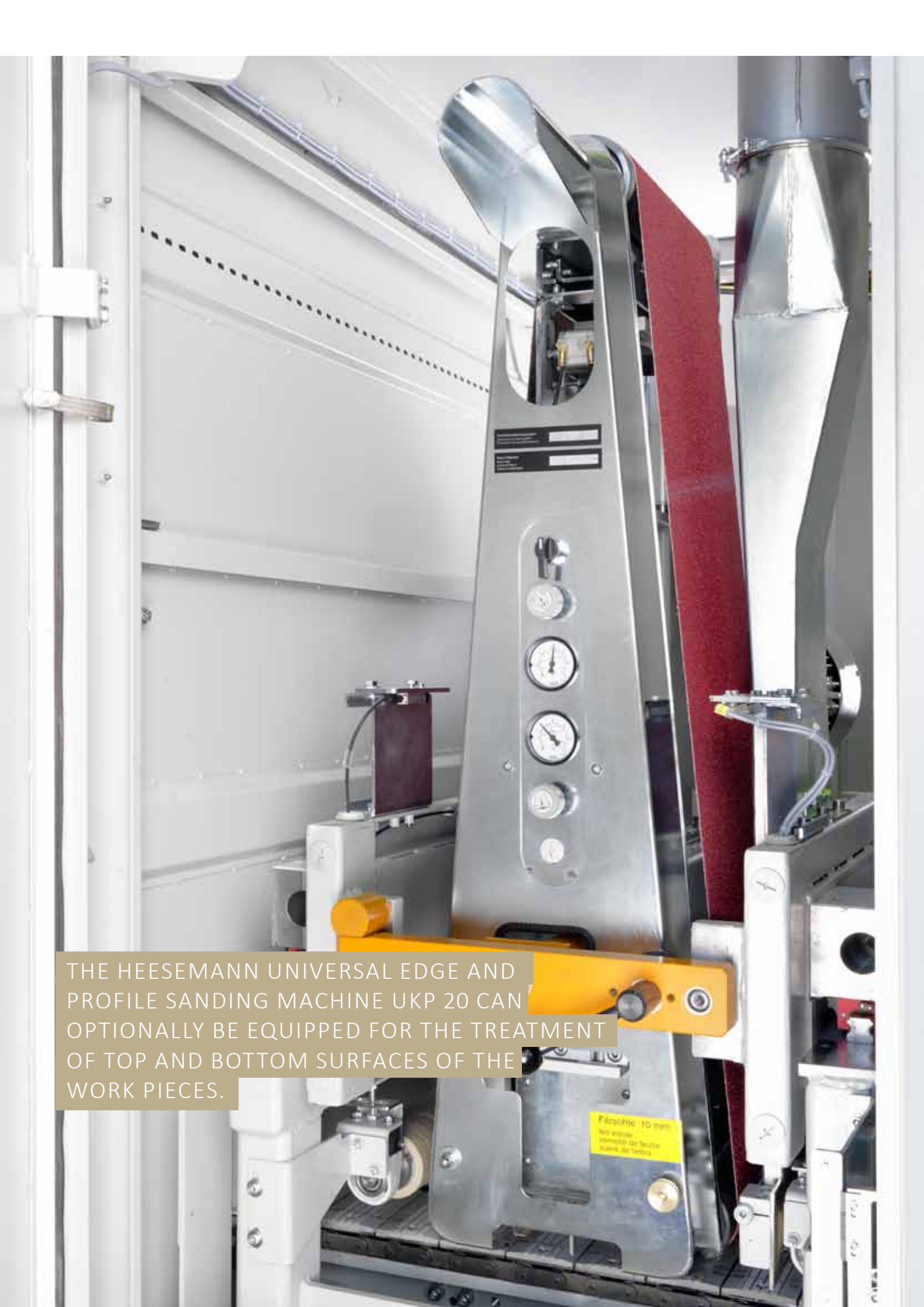
## **UKP 20** UNIT EGS

The controlled sanding disk unit EGS is adopted to the work piece to be sanded and is profiled accordingly. Disc wearing is automatically compensated during the sanding process. The cutting speeds can be continuously adjusted to the different sanding tasks.



## **UKP 20** ROTATING BLASTING DEVICE

For an intensive cleaning of the work pieces from adhesive sanding dust, the UKP can be equipped with a rotating blasting unit.



THE HEESEMANN UNIVERSAL EDGE AND PROFILE SANDING MACHINE UKP 20 CAN OPTIONALLY BE EQUIPPED FOR THE TREATMENT OF TOP AND BOTTOM SURFACES OF THE WORK PIECES.

Filzbreite 10 mm  
Nur mit  
sicherer der Saufen  
sicher der Saufen



# HEESEMANN

## UNIT L 300 / L 300-U

The Heesemann universal edge and profile sanding machine UKP 20 can optionally be equipped for the treatment of top and bottom surfaces of the work pieces. The sanding principle equals the one of the Heesemann surface sanding machines.

The units have a pneumatically controlled segmented pressure beam and a belt centre running regulation based on infrared. The maximum sanding width is 300 mm.

The unit L 300 sanding from above uses sanding belts with a belt length of 2 620 mm, the L 300-U sanding from below uses sanding belts with a belt length of 1 800 mm. Both units offer a stepless regulation of the sanding belt speed between 0,7 and 12 m/s.



*The unit L 300-U sanding from below with a sanding belt length of 1 800 mm.*



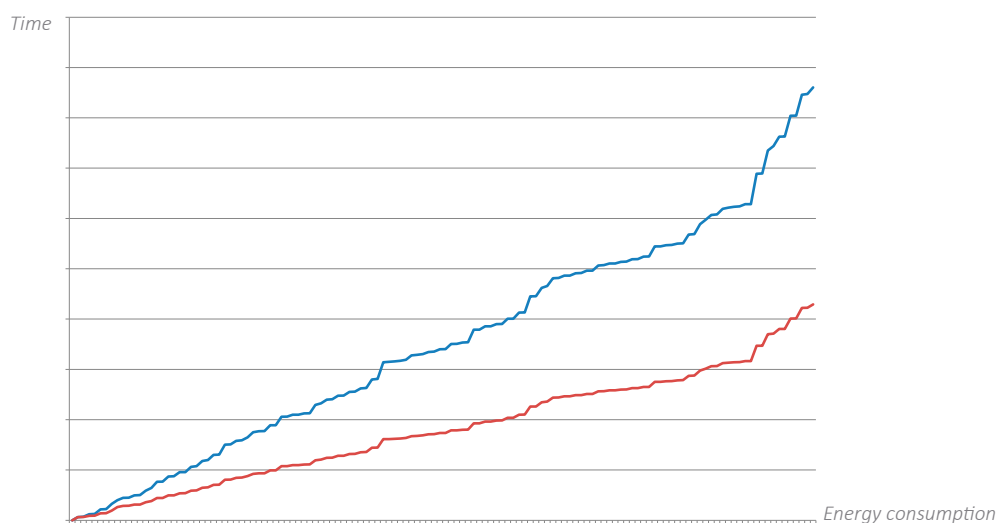
*From our EnergyManagement-System our environment and the machine-user benefit to the same degree. A diminished energy consumption unburdens the environment and reduces the cost.*

# HEESEMANN ENERGYMANAGEMENT-SYSTEM (EMS)

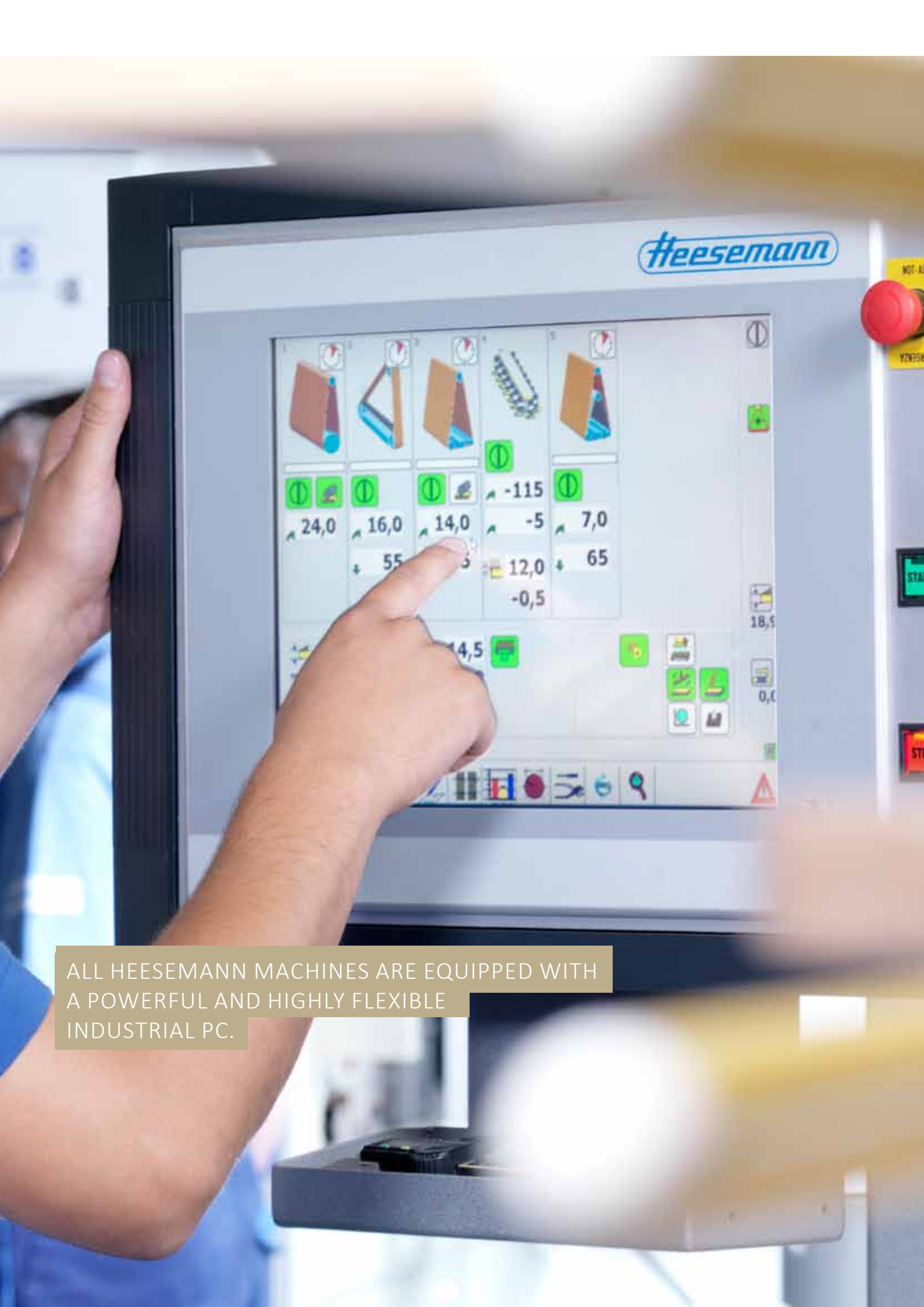
The UKP 20 can optionally be equipped with the EMS system. Both, our environment and the machine users, benefit from this energy-saving system to the same degree. A diminished energy consumption unburdens the environment and reduces the cost.

If no work pieces are being fed into the machine, the drive motors of the sanding units are run down to a low speed. 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 of 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 TOUCHSCREEN

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.



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



THE PROFILE TOOL SANDING MACHINE PWS-T IS USED TO MAKE THE COUNTER PROFILES NEEDED FOR PROFILE SANDING.

# HEESEMANN

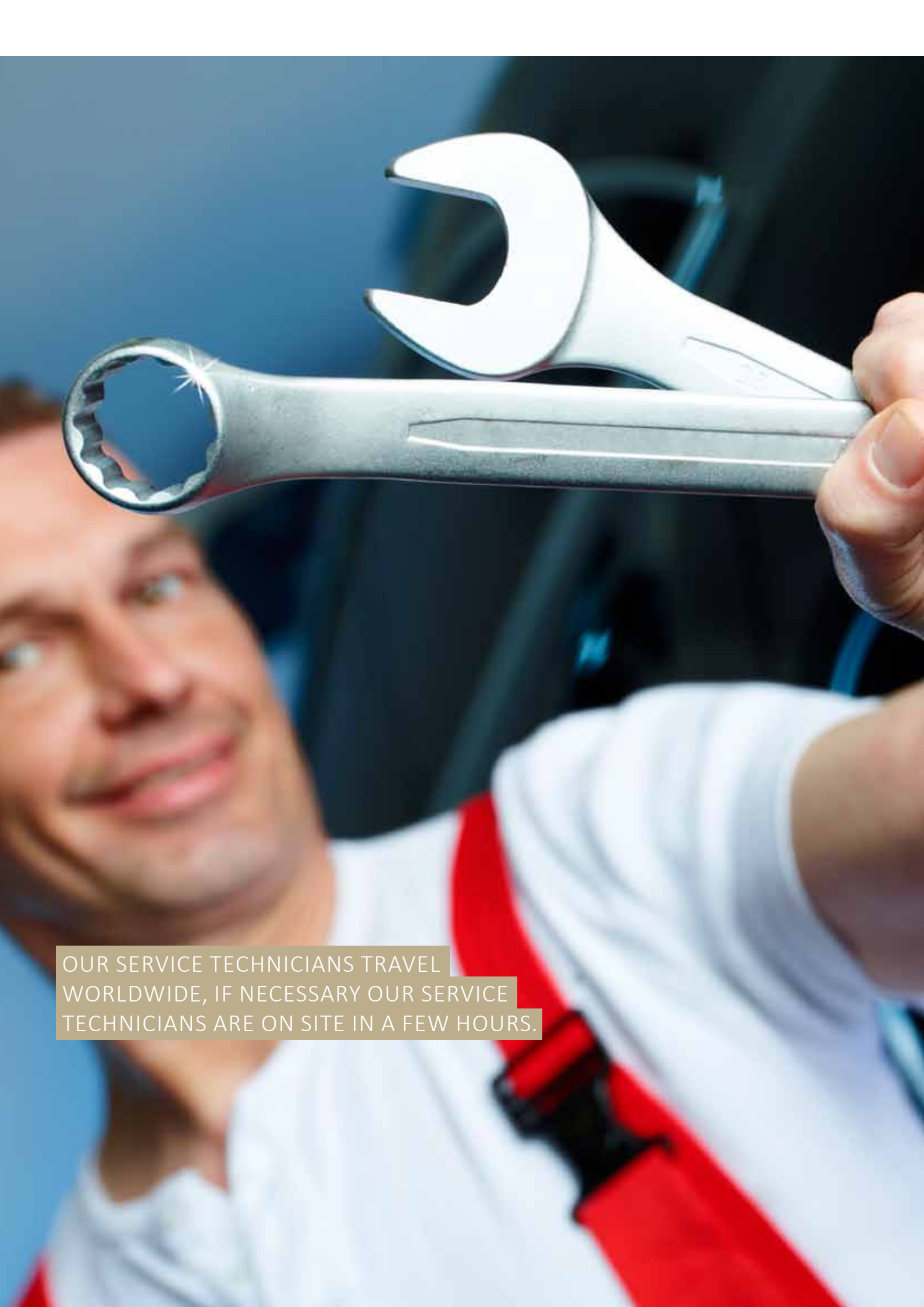
## PROFILE TOOL SANDING MACHINE PWS-T

The profile tool sanding machine PWS-T is used to make the counter profiles needed for profile sanding. The corresponding sample work piece is used for preparation.

The counter profiles regularly consist of a special felt. If the load on the felt counter profile is too high because of the shape or the amount of the work pieces to be sanded a metal tool can be used having air nozzles for cooling and to achieve an air cushion that reduces the friction and has a longer lifetime.



*A metal counter profile is made on the PWS-T using a sample work piece.*



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:

+49 5731 - 188-0

*Our service team is available on working days between 7 am and 5 pm.*



# TECHNICAL DATA

## UKP 20 - UNITS

### Modules

	M 4 / M 4-L 80	M 4 / M 4-L 130	M 4 / M 4-L 150	M 4 / M 4-L 200
<b>Sanding belt dimensions</b> (LxW mm)	2 300 x 80 2 800 x 80	2 300 x 130 2 800 x 130	2 300 x 150 2 800 x 150	2 300 x 200 2 800 x 200
<b>Drives</b> Performance/Revolution (kW   rpm)	2,0 750 2,6 1 500	2,6 750 3,2 1 500	2,6 750 3,2 1 500	3,5 750 4,5 1 500
<b>Sanding belt speed</b> (m/s)	6 / 12 0,7- 12	6 / 12 0,7- 12	6 / 12 0,7- 12	6 / 12 0,7- 12
<b>Swiveling range</b>	-45° - +90°	-45° - +90°	-45° - +90°	-45° - +90°

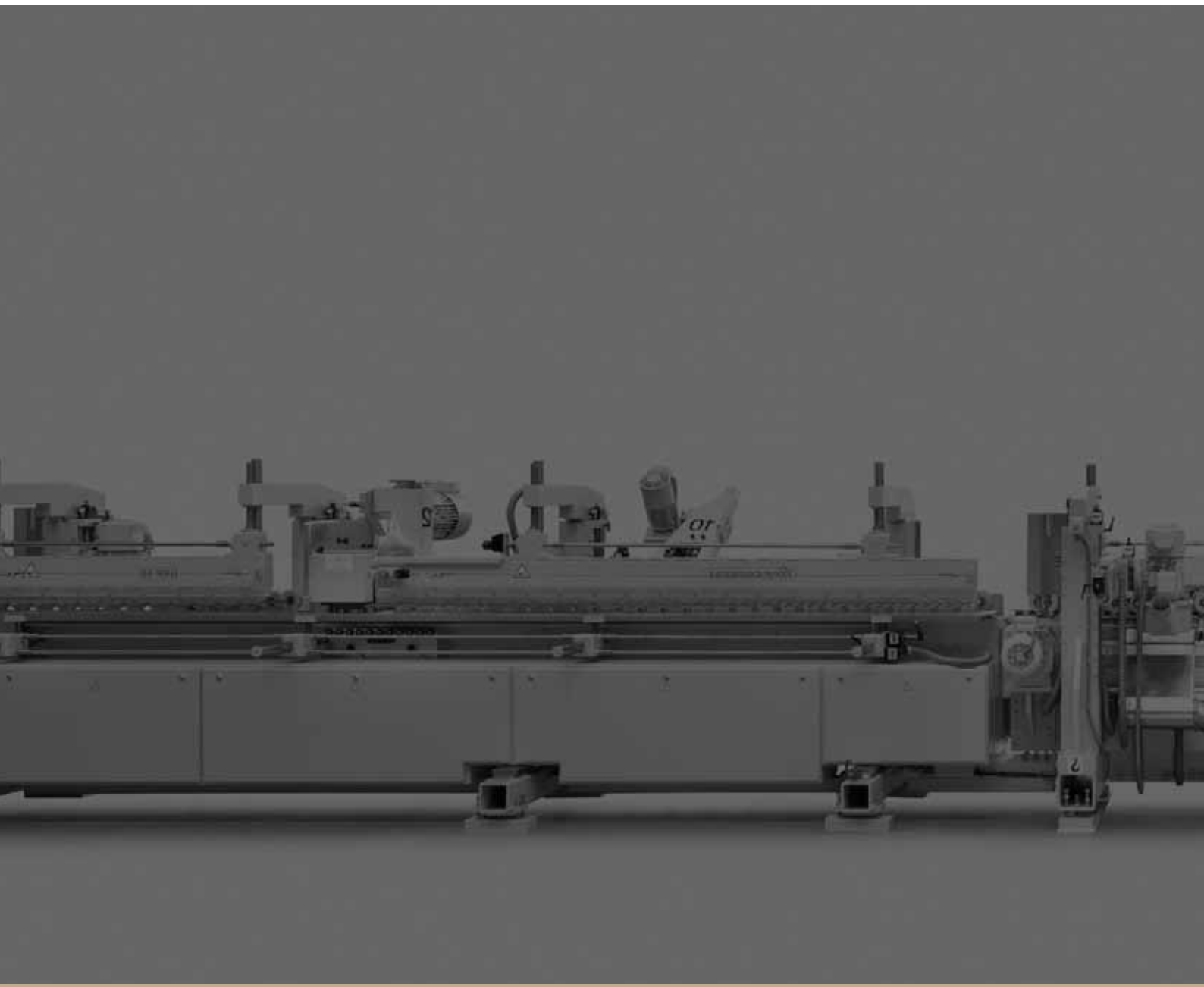
Subject to technical modifications.

### Modules





	K 4 50	Sanding brush 60 mm	Sanding brush 150 mm
<b>Sanding belt dimensions</b> (LxW mm)	2 000 x 50	Brush width 60 mm	Brush width 150 mm
<b>Drives</b> Performance/Revolution (kW   rpm)	0,55/0,75 1,6-16 1,1 kW	0,25	0,75
<b>Sanding belt speed</b> (m/s)	4 / 8 0,5 - 8 m/s	-	-
<b>Swiveling range</b>	-45° - +90°		

Subject to technical modifications.





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-  Surface sanding machines for wood  
*MFA Impression, MFA 10, LSM 8, KSA 8, BM 8, FBA 8*
-  Surface sanding machines for metal  
*MSM 10*
-  Edge and profile sanding machines  
*UKP 20*
-  Sanding machines for 3D processing  
*BM 8, UKP 20*