

# SWT 500

## Wide-Belt Sanding Machines





# BÜTFERING – The Fascination of Sanding

For over 60 years the BÜTFERING brand has stood for high performance wide-belt sanding machines and innovative surface finishing. These include special and multi purpose sanding machines for calibrating and intermediate sanding as well as lacquer finishing machines. Always focused on the machining of wood and wood based composite materials.

## World wide on site

BÜTFERING is on the spot and active world wide. Whether you are looking for good advice, sales or fast on-site service, you will find competent partners in over 65 countries representing the BÜTFERING brand.



The BÜTFERING SWT 500 series combines innovative machine construction and the latest sanding technology in a conclusive total concept. Special attention was paid to the equipment of the models, and this is why the SWT 500 DIAMOND rightfully carries the slogan 'fully equipped as standard'.

The specialists at BÜTFERING created production-oriented machine configurations and equipment packages to provide economic and user friendly solutions. Whether for solid wood, veneer or high gloss applications, this is no problem for a DIAMOND machine!

The DIAMOND range always takes advantage of the latest sanding technology. Today's models utilise the magnetic pad system MPS and the unique moulded SORB TECH machine frame. The energy efficient ECOTECH and the trend setting X-Head are all available within the DIAMOND concept.

Customers worldwide have relied on DIAMOND models for more than 8 years, not least due to the excellent worldwide service network of the HOMAG Group. Become a part of the DIAMOND family!





## Single Head Machines

The Diamond C offers an all round sanding capability. Whether used for calibrating, veneer or intermediate lacquer sanding, the Combi-head always offers you the right solution. The compact construction, the functional design and innovative technical details complete the total concept. The new Diamond C is especially suitable to the advanced requirements of modern woodworking and joinery workshops.



## Twin Head Machines

These twin head wide-belt sanders from BÜTFFERING are the versatile power packages for any application. Combining different head configurations these machines can easily be selected according to the type of production. When the emphasis is for veneer or lacquer work a cross and wide-belt configuration may be chosen, whereas for solid wood sanding the use of two combi-heads might be preferred. Each of the sanding heads has its benefits and when combined in a twin head machine offers a multi faceted sanding solution symbolic of the Diamond range – reflections of perfection, made by BÜTFFERING. Combine our strengths for your success!



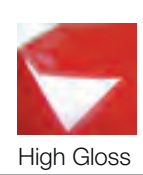
## Triple Head Machines

The DIAMOND triple head machines represent the flagship of the DIAMOND range and have proved to be the most successful and popular models. They combine high-tech made in Germany with an extraordinary diversity of applications. No matter whether your company carries out demanding solid wood and veneer processing jobs or lacquer and high gloss sanding, the triple head crossbelt sanders of the Diamond line have the appropriate configuration for your application and create a perfect finish in one pass. Refined design, ergonomic operation and capable of producing to the highest quality level – the best Diamond ever.

# The Diamond Models

The following are required for finish sanding:

- Multiple belt changes
- Max. one belt change
- Finish sanding in one pass



		Solid wood	Veneer	Lacquer	High Gloss
Diamond SWT 515 C		●	●	●●	
Diamond SWT 515 X		●	●	●●	●
Diamond SWT 525 CC		●●	●●	●●●	
Diamond SWT 525 CH		●●	●●	●●●	●
Diamond SWT 525 QC		●	●●	●●●	
Diamond SWT 525 QX		●	●●	●●●	●●
Diamond SWT 535 RQE		●●●	●●	●●●	●
Diamond SWT 535 RQH		●●●	●●	●●●	●●
Diamond SWT 535 QCE		●	●●●	●●●	●●
Diamond SWT 535 QCH		●	●●●	●●●	●●●

# Combi Head C




## Applications:

- Veneer sanding
- Fine sanding of wood and wood materials
- Lacquer sanding

## Benefits:

- Sanding head for light calibration work and fine sanding
- Maintenance free, profiled steel contact roller
- Exact tolerance calibration without 'wash out' effect
- Thickness tolerance variations in veneered and lacquered parts are easily handled by the use of the segmented pad
- Range of possible grit sizes  
Calibration: 60 to 120
- Range of possible grit sizes  
Fine sanding 120 to 400

Type of head	Combination head with profiled steel contact roller and electronically controlled segmented pad
Pad type	
Drive motor	15 kW
Cutting speed	2 - 18 m/s
Dimensions of abrasive belt	2620 mm x 1370 mm
Air-jet belt cleaning	standard program controlled



# Crossbelt Q



## Applications:

- Veneer sanding, tape removal
- For sanding of long cross veneered parts
- Intermediate lacquer sanding and preparation for high gloss
- Solid wood sanding

## Benefits:

- Long abrasive belt length, ideal for fine grit sizes
- Fibres, tape and glue residue are easily removed by sanding across the grain direction
- Levelling effect on veneered surfaces
- Optimum preparation for later coating processes
- Range of possible grit sizes  
P 120-1200

Type of head	Cross belt with electronically controlled segmented pad
Pad type	
Drive motor	13,5 kW
Cutting speed	1 - 16 m/s
Dimensions of abrasive belt	5360 mm x 150 mm
Air-jet belt cleaning	standard program controlled



# Chevronbelt H




## Applications:

- High quality sanding on all surfaces
- Intermediate lacquer sanding with very fine grit sizes
- Solid wood sanding, especially for frame parts

## Benefits:

- Thickness tolerance variations of up to 2 mm in veneered and lacquered parts are easily handled by the use of the segmented pad
- Wide contact zone produces very uniform surfaces

- Can adapt to most applications thanks to variable cutting speed
- No 'sand throughs' of edges with mps 2.0-technology
- Multi-track feeding to enable complete utilisation of the working width
- Constantly changing pressure zone keeps abrasive clean and eliminates oscillation marks
- Produces very flat and uniform surfaces and extends belt lifetime
- Best results for high gloss sanding
- Range of possible grit sizes P 120-1200

Type of head	Wide-belt electronically controlled segmented pad with inner chevronbelt
Pad type	
Contact width	125 mm
Drive motor	20 kW
Cutting speed	1,5–12 m/s
Dimensions of abrasive belt	2620 mm x 1370 mm
Direction of rotation	with or against feed direction (optional).
Air-jet belt blower	standard program controlled





# The flexible X-Head




## Applications:

- Fine sanding of wood and wood materials
- Calibration (chevron belt removed)
- Intermediate lacquer sanding
- High gloss preparation sanding

## Benefits:

- 3 in 1 sanding capability makes head extremely versatile in use
- Narrow 25 mm segment width eliminates 'sand throughs'.
- Enables multi-track feeding to maximise production
- Can adapt to most applications thanks to variable cutting speed
- Range of useful grit sizes P 120-800

Type of head	Wide-belt Combi with: Contact roller Segmented pad Inner Chevron belt
Pad type	
Drive motor	20 kW
Cutting speed	2 - 16 m/s for „H“ 2 - 18 m/s for „E“ and „C“
Dimensions of abrasive belt	2620 mm x 1370 mm
Air-jet belt blower	Standard program controlled



# Segmented Pad E




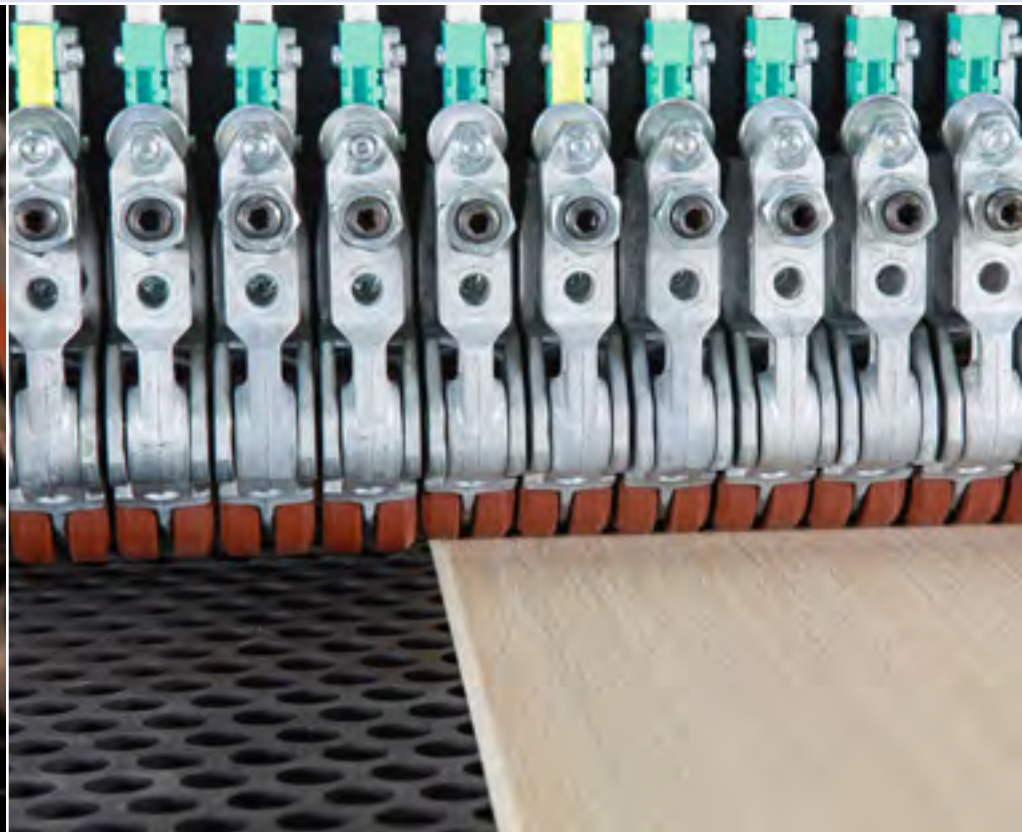
## Applications:

- Fine sanding of wood and wood composite materials as well as lacquered surfaces
- Improving and upgrading pre-sanded surfaces

## Benefits:

- Thickness tolerance variations of up to 2 mm in veneered and lacquered parts are easily handled by the use of the segmented pad
- Can adapt to most applications thanks to variable cutting speed
- No 'sand throughs' of edges
- Enables multi-track feeding to maximise production
- Range of possible grit sizes P 120-400

Type of head	Electronically controlled segmented pad
Pad type	
Drive motor	7,5 kW (QCE) 15 kW (RQE)
Cutting speed	1 - 9 m/s (QCE) 2 - 18 m/s (RQE)
direction of rotation	with or against feed direction (optional).
Dimensions of abrasive belt	2620 mm x 1370 mm
Air-jet belt blower	standard program controlled



# Contact Roller Head R



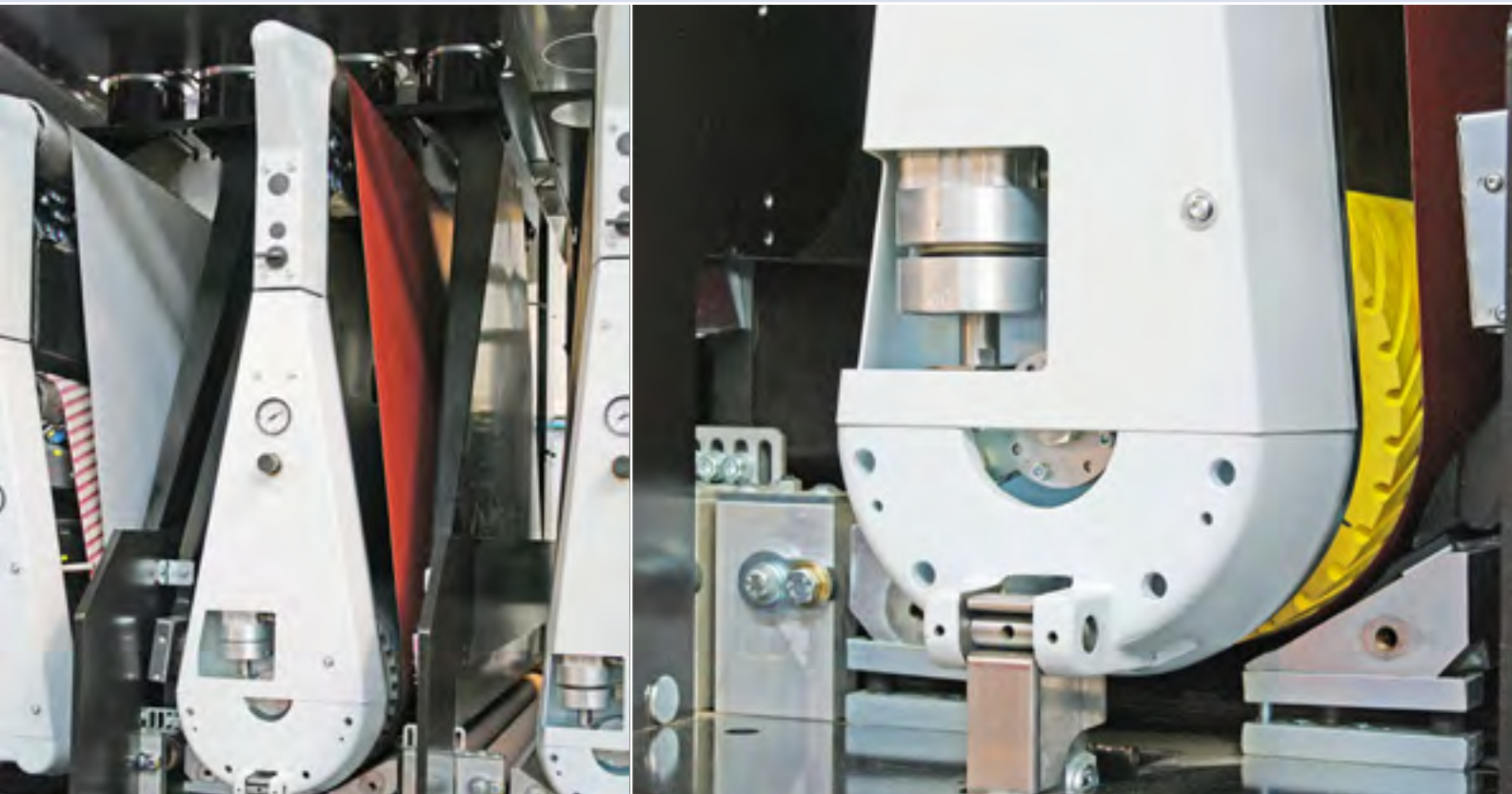
## Applications:

- Calibrating of wood and wood material
- To produce a surface roughness suitable as a mechanical key for glueing

## Benefits:

- Exact tolerance calibration at high stock removal rates
- Maintenance free, profiled steel contact roller
- No 'wash out' effect between early/late woods

Type of head	Profiled steel contact roller
Drive motor	22 kW
Cutting speed	18 m/s
Dimensions of abrasive belt	2620 mm x 1370 mm
Air-jet belt blower	optional program controlled



# Solid advantages with SORB TECH

Developed by HOMAG as a vibration absorbing engineering material, the SORB TECH product has been used to maximum benefit by the BÜTFERING design team. Moulded to form the complete machine base, the heavy mineral composite provides the perfect platform with which to build sanding machines. Residual vibration from drives and even abrasive belts are eliminated, and this results in the machine giving significantly improved sanding results.



The mineral composite material SORB TECH offers far better vibration absorption over welded frame and cast iron constructions. This technology is unique, trend-setting and patented – a world exclusive only from BÜTFERING.



# MPS 2.0 Magnetic Pad System

**mps 2.0 – magnetic pad system – the latest development from BÜTFERING uses a magnetic solenoid to generate sanding force as opposed to a pneumatic system. Linked with a PLC this offers a greater degree of control over the function of the segmented pad and brings significant advantages**

## Dynamic Force Control

- Using the PLC each solenoid can be given an individual force and is also designed to exert more pressure as it extends to compensate for belt tension. The force also ramps on and off progressively at leading and tail ends of the parts to guarantee a uniform sanding result even on the thinnest of veneers and lacquers.

## No 'slip stick'

- Ultra-smooth piston guidance eliminates any 'stiction' effect found with air cylinders. This is an important element when asking the segmented pad to compensate for part thickness variations.

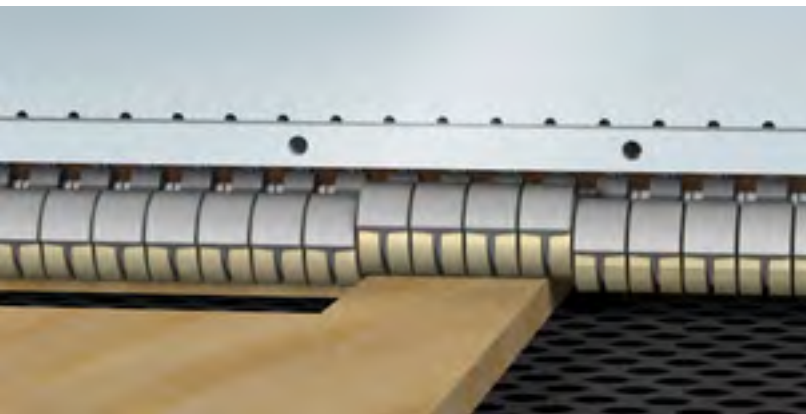
## Proportional Pressure Control

- Proportional pressure control at the part edge is easily achieved with the standard 2:1 sensor/solenoid package. Edge pressure is constantly modified according to whether 1 or 2 edge sensors have been activated.

Customer Benefit:
Parts are sanded uniformly without risk of sanding through lacquer or veneer

Customer Benefit:
Excellent thickness tolerance compensation Maintenance free solenoids

Customer Benefit:
Ensures perfect sanding results 'tip to tip'



## A choice of two systems

### mps 2.0 standard

- 2:1 proportional sanding system with 25 mm sensing

### mps 2.0 plus

- 4:1 proportional sanding system with 12,5 mm sensing

Customer Benefit:
meets almost all requirements in a cost effective way

Customer Benefit:
For special applications

# Standards

## Workpiece thickness setting constant passline

- Stable frame design with a constant workpiece infeed height of 900 mm
- Workpiece thickness range 3–160 mm by four (40 mm diameter) threaded spindles adjusting the upper machine frame



## Variable cutting speed

- Rotation speed control via frequency inverter
- Power transmission via Poly V-belts

## Touch Screen Operator Terminal

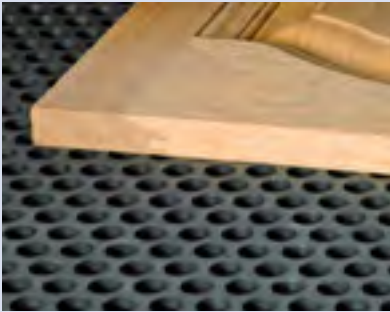
- 10,4" Touch Screen for the complete control of the machine
- 200 sanding programs
- Clear-text error message, storage of all sanding parameters
- Program change on the 'fly' within seconds



# Standard

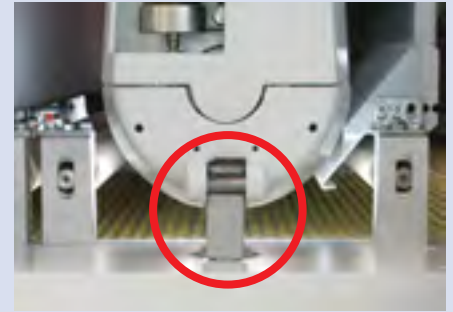
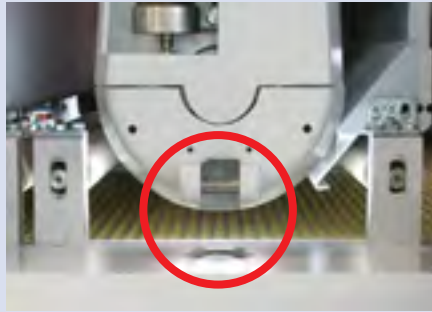
## Vacuum table for secure part feeding

- All machines supplied with vacuum table with high-performance fan with flow control valve
- Fan is mounted inside the machine and directly to the SORB TECH base to keep noise, space and vibration to a minimum



## Automatic head locking

- The head automatically locks and unlocks when the door is opened or closed
- Faster and more secure abrasive belt changes



## Feeding unit

- Variable feed speed
- Rubberised drive drum
- High quality multi-ply conveyor belt

$V_f = 2,5 - 13 \text{ m/min}$



## Automatic overthickness protection

- Feed stops in the event of over thick parts being fed
- Sanding head stops immediately and sanding heads retract
- Touch Screen is blocked for incorrect use
- Clear text error message



# Standard

## Rubberised pressure rollers

- Spring loaded rollers with guidance system
- Mounted to give 'radial' rather than vertical lift
- Rubberised pressure rollers
- Positioned close to sanding heads
- Additional pressure rollers before and after the part sensing zone



## Air-jet belt blower

- Adjustable air-jet belt blower, adjustable in five steps
- Program controlled
- Application optimized cleaning results with up to 40 % saving of compressed air consumption
- Up to 35 % saving of dust extraction volume by intelligent air-jet placement
- Workpiece controlled with programmable timing

## Electronic abrasive belt oscillation

- Non contact oscillation system keeps the abrasive belt on track
- The system is operator-friendly located on the abrasive belt changing side

## Emergency stops

- Total of three emergency stop buttons fitted on the infeed and outfeed sides of the machine
- Immediate machine stop



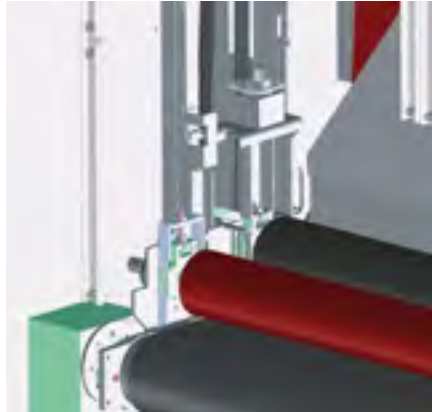
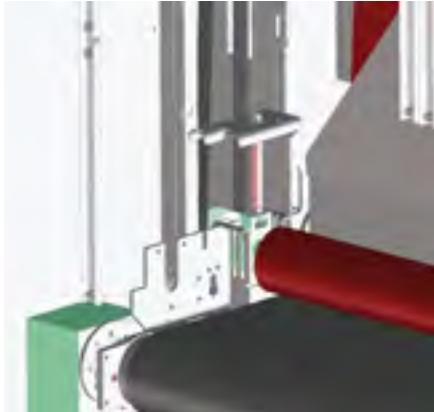


# Standard

## Free space flexibility

Space available to fit two of the following options:

- Driven panel cleaning brush
  - Satinising or Structuring brush
- Cleaning system with ionisation device and rotary air-jet parts cleaning system, activated by the workpiece



## Options

### Fold-away outfeed table (optional)

- Fold-away table – optional
- Useful for longer parts



### Wireless thickness caliper ME 5000

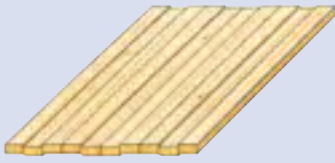
- An innovation from BÜTFERING
- Cable-free transmission of workpiece thickness measurements to the machine
- Various measuring modes



### Telescopic infeed extension

- Helpful when feeding larger parts

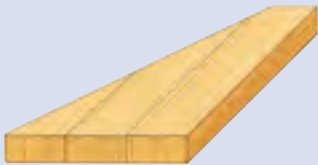
# Applications



Glued up parts



Windows



Joinery components



Workpiece with cutouts



Veneered panels



Chipboard/MDF



Shaped parts



Bowed panels



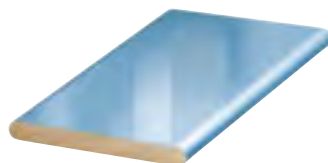
Veneered panels with different thicknesses



Panels with thickness variations



Panels with solid edges



Lacquered or filled parts



# Even more benefits as a BÜTFERING customer

## World wide customer service

The well established sales, service, and dealer network of the HOMAG Group ensures fast response times and close customer proximity throughout the world.

## Practical training

BÜTFERING-sanding machines are extremely user friendly, however a basic training course is provided alongside commissioning to increase user proficiency. When required, we can also offer additional on-site training, or this can be done in our dedicated training rooms at the BÜTFERING factory.

## Same parts, simple handling

Many parts, control elements and components are identical in the machines of the HOMAG Group. This makes operation easier, cuts costs, reduces spare parts stock and speeds up maintenance and service. Moreover, scheduled, professional maintenance increases the availability and productivity of the machines.

## Professional documentation

Standard, comprehensive operating instructions and machine diagrams are supplied with every machine. These can be supplied in many different languages.



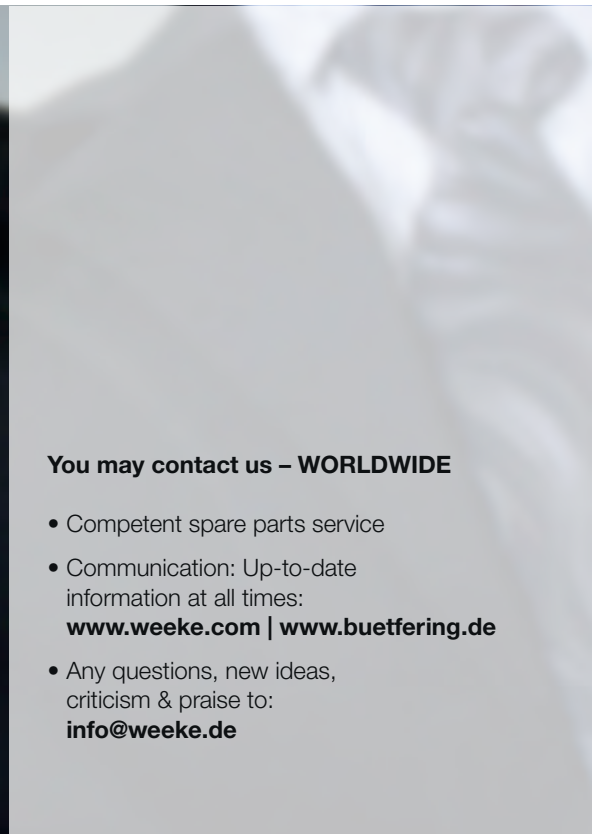


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