



# KREBSDRESS

## Product description

The dressing spindle KREBSDRESS 300 AS was designed together with the BT-01 operating terminal as a system solution for rotary dressing of grinding wheels. The products are perfectly matched to each other and offer the function of rotary dressing, enabling the use of high-performance CBN and diamond grinding wheels in vitrified bond.

The application possibilities of the system are manifold, as not only an integration in new machines, but also a retrofitting on existing machines and furthermore the mobile use on permanently installed grinding machines is possible.

The compact dimensions of the KREBSDRESS in combination with the high performance guarantee easy and flexible handling. The generous equipment that the system offers together guarantees optimal adaptation possibilities to the respective dressing situation. These include a wide speed range, an actual speed detection with readjustment, the selection of left and right rotation and the possibility of very simple integration into the machine control. In order to achieve the workpiece qualities required today, a very high concentricity and rigidity of the dressing spindle is required, which is ensured by a sophisticated design and high-precision and at the same time maintenance-free bearings of German manufacture.

## Appropriate use

The device is for commercial use with the dressing wheels and accessories approved by KREBSDRESS within grinding machines for wet and dry processing of grinding wheels.

Any other or further use is considered as not in accordance with the intended purpose.

**The user is liable for damages caused by improper use.**



## Security instructions

Before using the device for the first time, read these operating instructions and act accordingly. Failure to observe the safety and operating instructions may result in electric shock, fire and/or serious injury. Keep this manual in a safe place for future use or for future owners.



- **Repairs to the device may only be carried out by persons who are authorised and trained for this purpose.** Always use original spare parts. This ensures that the safety of the unit is maintained.
- Dressing wheels must be designed for at least the speed indicated on the power tool. Dressing wheels running at overspeed can burst and cause injury.
- Never bring your hand near a rotating dressing wheel. The rotating movement can pull your hand between the dressing and grinding wheel.
- Do not use any accessories that are not specifically designed and recommended by KREBSDRESS for this power tool. Just because you can attach the accessories to your power tool does not guarantee safe use. In case of replacement, use only the original balanced KREBSDRESS dressing diamond disc with the special four-hole mount. Mount the new disc only with the supplied fixing screws.
- Check the dressing wheel before use. Do not use damaged or worn dressing wheels. Check the disc for chipping and cracks before each use. If the spindle or dressing wheel falls down, check both for damage. Only use undamaged dressing wheels. Once you have checked and used the dressing wheel, keep yourself and any nearby personnel out of the plane of the rotating dressing wheel and allow the spindle to run at maximum speed for one minute. Damaged dressing wheels usually break during this test period.
- **Wear personal protective equipment. Use full face protection, eye protection or safety glasses, depending on the application.** Eyes should be protected from flying debris or grinding dust generated during various applications.
- Always fix the unit on the magnetic plate or screw it to the T-slot plate of the tool table of the grinding machine. Ensure that the connecting cable is not in the area of the dressing wheel. Contact with a live cable can also put metal parts of the device under voltage and lead to an electric shock.
- **Avoid blocking the dressing wheel or excessive contact pressure. Do not apply excessive pressure per dressing cycle.** Overloading the dressing wheel will increase its stress and susceptibility to jamming or blocking and thus the possibility of jamming or grinding wheel breakage.
- Ensure that the dressing wheel is fitted according to the manufacturer's instructions. Incorrectly fitted dressing wheels can become loose and be ejected during work.
- **The mounted dressing wheel must be able to rotate freely.** Perform a test run of 30 seconds with the new disc. Only use precisely rotating, balanced diamond discs.
- Handle the dressing wheel carefully and store it according to the manufacturer's instructions. Damaged discs may crack and burst during operation.
- **It is forbidden to screw or rivet signs and symbols on the power tool.** Damaged insulation does not provide protection against electric shock. Use adhesive labels.
- Before beginning to work, check the mains cable and the mains plug for damage.
- Never start or stop the dressing spindle while it is in contact with the grinding wheel to be dressed.
- **The operator is responsible for himself and all persons in the vicinity of the machine.**
- **The unit must not be operated without the barrier air supply connected and functioning!**



## Symbols used

Read operating manual		Important notice	
Unplug power cord		Danger from electric current	
Wear protection glasses		Confirms the conformity with the directives at the European Community	

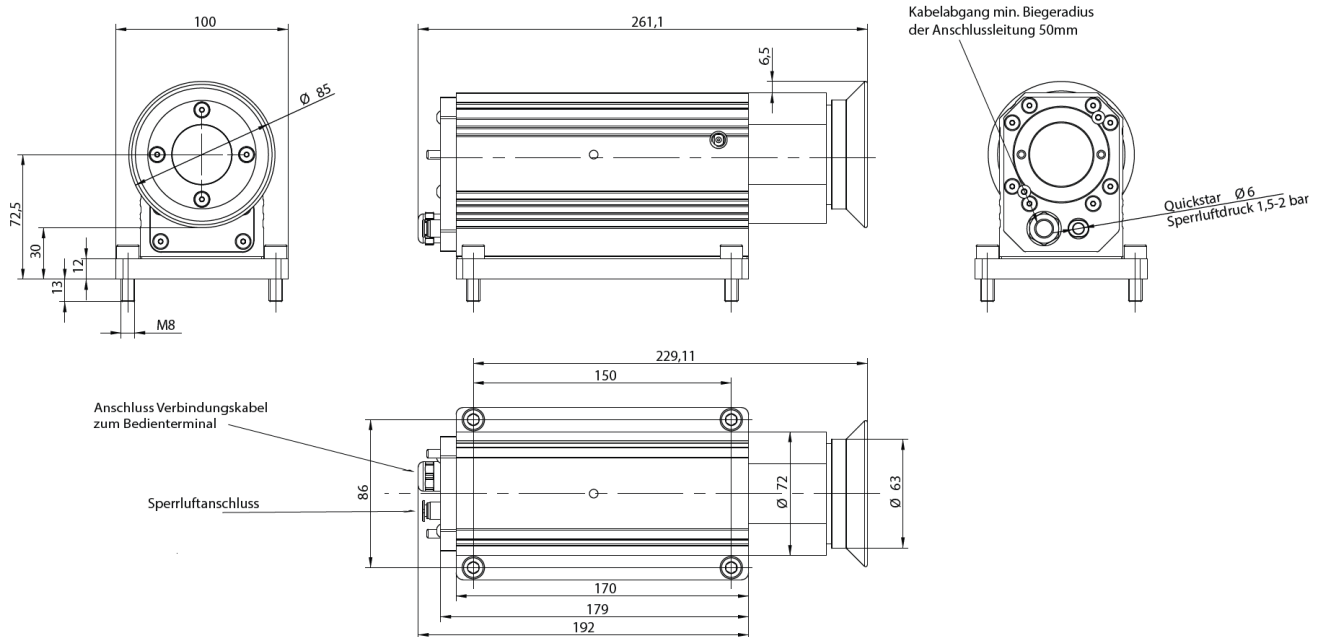
## Legal Notice

Improper handling as well as disassembly of the dressing spindle or the operating terminal invalidates any warranty and guarantee claims. Repairs may only be carried out by the manufacturer.






### Abrichtspindel 300 AS

Technical Data Dressing Spindle 300 AS	
Speed range	1.500 – 15.000 U/min
Voltage / frequency	230 V / 50-60 Hz
Power consumption	ca. 1,7 A
Power output	approx. 300 Watt
Torque	approx. 20 Ncm
Connection cable spindle to operation terminal	Oil resistant, 7 m with 7-pole screw plug
Sealing air connection	Ø 6 mm
Sealing air	1 - 2 bar
Protection type	IP 66 with plugged seal air connection
Protection class	I
Clockwise / Counterclockwise rotation	yes
Main bearing	Precision bearing - Made in Germany
Dimensions	261 x 100 x 115 mm
Weight	6,0 kg





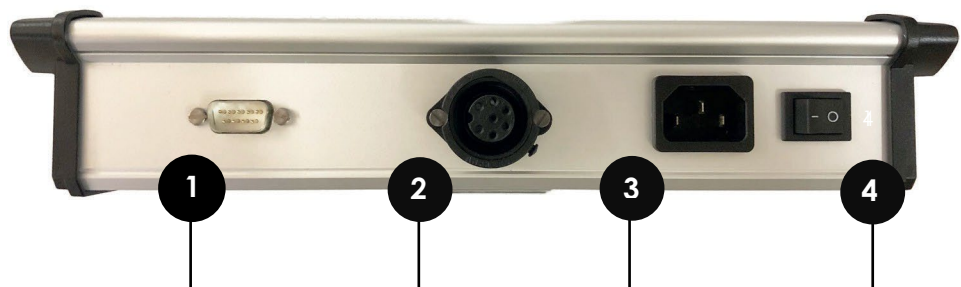
## Operation Terminal BT-01

Technical Data Operation Terminal BT-01	
Voltage / frequency	230 V AC / 50-60 Hz
Control elements	Mainswitch Motor on/off  (Touch) Speed   (Touch) Mode 123 (Touch)
Display	70 x 38 mm, blue backlighted
Fuse in control panel	10AT and 1AT size 5 x 20mm
Dimensions	294 x 185 x 57 mm
Weight	1,0 kg
max. ambient temperature and humidity	40° C with max. 50 % RH

Front view



Back view

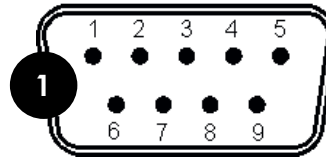


Function	External control mode 2 +3	Control dressing spindle	Power connection	Mainswitch
Type	Sub-D 9-pole	Screw plug 7-pole	Connector plug 230 V AC	Rocker switch on/off 230 V AC



### Anschluss externer Steuersignale

Sub-D Stecker 9 Pole  
(rear view of operation terminal)



Mode 2 – Semi-automatic		
Function	Pin assignment	
Start / Stop via digital input signal	PIN 1 PIN 2	0 V = Motor off   24 V DC = Motor on GND respectively 0 V

Mode 3 – Fully-automatic		
Function	Pin assignment	
Start / Stop via digital input signal	PIN 1 PIN 2	0 V = Motor off   24 V DC = Motor on GND respectively 0 V
Speed via analog input signal	PIN 3 PIN 4	0 - 10 V DC GND respectively 0 V

### Function of operating modes

The respective mode is selected on frontside at „Betriebsart/mode“ (button 123). The respective selection is shown in the display and remains stored even after the power switch has been operated until it is changed by the operator.

Mode 1 – Manual operation	
1	Speed selection is made manually via touch buttons ▲▼
2	Motor Start / Stop via touch button ⏻

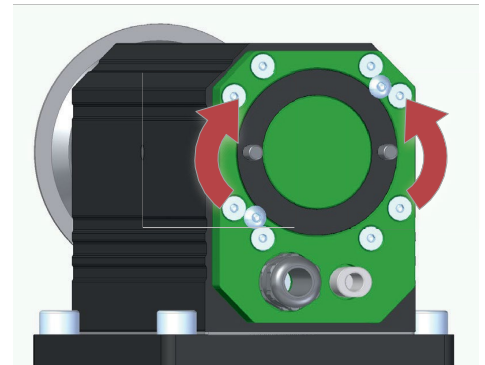
Mode 2 – Semi-automatic	
1	Speed selection is made manually via touch buttons ▲▼
2	Motor Start / Stop via digital input signal Sub-D PIN 1 + PIN 2

Mode 3 – Fully-automatic	
1	Speed selection via analog input signal Sub-D PIN 3 + PIN 4
2	Motor Start / Stop via digital input signal Sub-D PIN 1 + PIN 2



### Start of operation

Position the dressing spindle on the grinding wheel to be machined and connect the connecting cable to the operating terminal using screw plug. The direction of rotation is set directly on the dressing spindle on the cable outlet side (green) with the black turntable and the two setting pins.



Turn the wheel **clockwise** until stop  
= direction of rotation **counterclockwise**

Turn the wheel **counterclockwise** until stop  
= direction of rotation **clockwise**

- 1 Before commissioning, compare whether the mains voltage and mains frequency specified on the type plate correspond to the data of your mains supply.
- 2 Then connect the operating terminal to mains voltage (230 V AC / 50 Hz) using the mains cable and switch it on at the mains switch.
- 3 After the start screen, check the set mode. To change the operating mode, press and hold (1.5 seconds) the 123 button. While the spindle is running, the mode button 123 is out of function for all three operating modes.

**Please note that the speed indicator on the display always shows the actual speed (ACTUAL speed) applied to the dressing spindle. Due to the mass inertia of the heavy motor, the control and dressing spindle are delayed in the display when the speed is adjusted.** Also due to the mass inertia of the motor and dressing wheel, the spindle needs approx. 2 seconds to come to a complete stop after the motor has been switched off.

To avoid accidental starting/stopping or changing of operation mode the buttons and 123 react only at touching them for longer time (press and hold for 1,5 seconds).



### Mode 1 – Manual operation

Set the desired speed with the keys ▲▼. The last set speed remains stored even after disconnection from the mains voltage. The spindle is started with touch button ⏻ and stopped by pressing it again. The display shows the actual speed of the dressing spindle.

### Mode 2 – Semi-automatic

Set the desired speed with the keys ▲▼. The last set speed remains stored even after disconnection from the mains voltage. To start the spindle apply control signal 24 V DC to PIN 1 and GND to PIN 2. To stop apply 0 V to PIN 1 and GND to PIN 2. The display shows the actual speed of the dressing spindle.

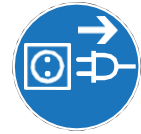
### Mode 3 – Fully-automatic

The speed is set with the control signal 0-10 V DC on PIN 3 and GND on PIN 4. The last set speed remains stored even after disconnection from the mains voltage. To start the spindle, apply control signal 24 V DC to PIN 1 and GND to PIN 2. To stop, apply 0 V to PIN 1 and GND to PIN 2. The display shows the actual speed of the dressing spindle.



### Operating instruction

Before changing the dressing wheel and all other work carried out directly on the dressing spindle – pull out the main plug!



### Maintenance and cleaning

- Maintenance and cleaning work on the unit only when the mains plug is disconnected.
- Repairs to power tools may only be carried out by a qualified electrician!
- A defective mains connection cable may only be replaced by an original KREBSDRESS mains connection cable.



### Storage and operating mode

The system must be stored in a dry place, otherwise corrosion of the electrical components may occur.

**The spindle is not designed for operating mode S1 (continuous operation)!**

### Zubehör und Ersatzteile

Sollte das Gerät trotz sorgfältiger Herstell- und Prüfverfahren einmal ausfallen, ist die Reparatur vom Hersteller ausführen zu lassen. Bei allen Rückfragen und Ersatzteilbestellungen bitte dabei unbedingt die Seriennummer laut Typenschild des Gerätes angeben. Verwenden Sie nur Original KREBSDRESS-Zubehör.

### Disposal

Never throw the device in normal household waste. Dispose of the device via an approved disposal company or via your municipal disposal facility. Observe the currently applicable regulations. If in doubt, contact your local waste disposal facility. Dispose of all packaging materials in an environmentally friendly manner.



### Warranty

For this device we offer a warranty in accordance with the legal/country specific regulations from the date of purchase (proof by invoice or delivery note). Any damage incurred will be repaired or replaced. Damage caused by improper handling is excluded from the warranty. Complaints can only be accepted if the device is handed over to manufacturer or an authorized service center without being disassembled. We reserve the right to make technical changes. We assume no liability for printing errors.





### Principles of dressing

$Q_d = VR / VC$	$q_d$	Speed ratio dressing wheel to grinding wheel
	VR	Circumferential speed of dressing wheel
	VC	Circumferential speed of grinding wheel

#### Recommendation:

- Ideal speed ratio for dressing a vitrified bonded CBN/DIA grinding wheel is 0.7 - 0.8.
- Maximum infeed per dressing stroke 0,002 – 0,005 mm.

